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THE WORLD'S LEADING PROFESSIONAL AUDIO TECHNOLOGY MAGAZINE

124th AES
AMSTERDAM REVIEW

Indiana Jones
Final Cut Special

New Microphones
A Product Sampler

Koolworld
Jazz… And More

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Engineer/Mixing Engineer
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By the time you read this, the public voting phase for this year's Conch awards will be in full swing. Once again, the awards have attracted an increased number of nominations, and the awards look set to be as compelling, competitive, and enjoyable as ever. It's undoubtedly important that the UK showcases its audio production talent to the world in this globalising economy, and given the short shrift that most other media industry awards give to sound, it's admirable that the UK Screen Association and the Conch committee have made such a success of the event.

I have to say that I admire the people involved in making this thing happen. Without exception, they are the kind of people who really shouldn't have time to be involved with something like this, but somehow find that time. Unlike 'bad' committees made up with people who have (normally for good reason) too much time on their hands – though those people have, on the whole, migrated to Internet forums over the last few years.

However, it's now imperative that you get involved. Whether you are directly involved, through nomination or sponsorship or any other route, you must vote. It shouldn't be too difficult for audio professionals to prise themselves away from the main business of the day and spend a few moments contributing to the industry, and it has a disproportionately large impact. The more people who vote, the more representative the short lists will be – the judges can only choose from a shortlist created through this vote. The whole industry benefits from the publicity, the accolades, and the Conch branding.

So, before you do anything else, please go to the UK Screen Association website (ukscreenassociation.co.uk/conch), or directly to the *Audio Media* hosted voting form (audiomedia.com/conch) and make your mark. Remember, if you make one of those marks on the Unsung Hero award, you are still eligible to win a stack of gear from Steinberg, Focusrite, KRK, and SE Electronics. While I'm absolutely certain that you don't strictly need these kinds of blatant inducements to click a few boxes, it might just tip the balance for those who could do with a gear surge (who couldn't?).

Lastly, a note to manufacturers. While the August issue may seem a while away, it takes no effort at all to miss out on helping us (and you) with the annual *AM Equipment Guide*. Look to your e-mail inbox over the next couple of weeks as we try to make sense of the pro audio gear marketplace on behalf of the *AM* readership – and take action sooner rather than later.

Paul Mac, Editor

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PRODUCT UPDATE

Brauner Phanthera, Phantom Classic

German microphone maker Brauner is now offering more budget-friendly versions of its cardioid-only Phanthera and variable Phantom Classic. According to the manufacturer itself, "The basic versions of our popular FET microphones are equipped with an essential set of accessories – the microphone and a sturdy mount, delivered in a robust box, [which] can be extended at any time to match the standard versions by purchasing optional accessories."

SEA Distribution & Consulting
+49 5903 9388 0
www.sea-distribution.com

NEW PRODUCT

Audio-Technica ATH-W5000

Audio-Technica has unveiled its new ATH-W5000 dynamic headphones (SRP: £699.95); featuring a striped ebony housing carved from a solid block for acoustic matching, its large aperture (53mm) neodymium magnet-based transducers produces an ultra-low (5Hz) to super-high (45kHz) frequency response, while the Wing Support Housing vibration-proof mechanism and patented Double Air Damping System ensures comfort and accurate reproduction.

Audio-Technica (UK)
+44 (0)113 277 1441
Audio-Technica US
+1 330 686 2600
www.audio-technica.com

NEW PRODUCT

Solid State Logic Mynx

Oxfordshire-headquartered British analogue and digital console manufacturer Solid State Logic has introduced Mynx, effectively a cost-effective (£250 RRP, excluding VAT) 'mini' version of the acclaimed X-Rack modular rack system that allows users to slot in up to two modules from the company's complete range of X-Rack modules – namely, the XR618 Dynamics Module; XR621 Mic Amp Module; XR622 Master Bus Module; XR623 Four Channel Input Module; XR624 Eight Channel Module; XR625 Channel EQ Module (direct copy of the XL 9000 K Equaliser, as used on the Duality and AWS900+ consoles); XR626 Stereo Bus Compressor Module (centre section module from the 1980s-vintage G-Series analogue console); and XR627 VHD Input Module (with the new Variable Harmonic Drive circuit). Example applications include combining the XR618 and XR621 to create a front-end recording system for vocals, or pairing up an XR625 with an XR618 to achieve characteristic SSL channel strip processing.

The Mynx itself features a rugged metal enclosure made from 4mm-thick extruded aluminium, measuring a desktop-friendly 106mm (W) x 192mm (H) x 186mm (D). Power supply to the mounted modules is via the Mynx's external power supply while audio connections are made directly to the rear of the modules themselves.

Solid State Logic (HQ)
+44 (0)1865 842300
Solid State Logic (Eastern Region)
+1 212 315 1111
Solid State Logic (Western Region)
+1 323 549 9090
www.solidstatelogic.com

NEW PRODUCTS

KRK Rokit 5, Rokit 6, Rokit 8

Floridian powered recording monitor manufacturer KRK Systems has launched the second generation of its Rokit monitor, replacing the current five-, six-, and eight-inch models.

Also available in five- (Rokit 5), six- (Rokit 6), and eight-inch (Rokit 8) variations, the new models incorporate several technologies from the company's flagship VXT and Exposé E8B lines, including a curved front baffle, engineered to minimise diffraction of high frequencies, purportedly resulting in a sweet spot that is significantly larger than products with square or rounded baffles.

Stated Tony Rodrigues, Vice-President of Marketing for KRK Systems: "Even in this day of 'sweet' sounding monitors that demo well in the store, but fall down in a mixing environment, KRK has stayed true to its commitment of providing accurate, honest tools for home, project, and professional studios."

Focusrite Audio Engineering
+44 (0)1494 462246
www.focusrite.com
KRK Systems
+1 954 316 1580
www.krksys.com

NEW PRODUCT

RNDigital D1

RNDigital has released D1, a graphics dynamics processor based on its DYNAMIZER Zone Audio Level technology, developed in order to make the company's dynamics control technology more intuitive.

www.rogernicholsdigital.com

PRODUCT UPDATE

Sonnox Oxford SuprEsser

UK distributor Source is shipping Sonnox's Oxford SuprEsser professional de-esser and dynamic EQ native (RTAS, AU, VST) plug-in. Those purchasing the product before June 30 will save themselves 10% off its standard price (£180, plus VAT).

www.sourcedistribution.co.uk

PRODUCT UPDATE

zplane.development vielklang

zplane.development's vielklang audio harmonisation instrument is now available from UK distributor Time+Space. vielklang allows users to generate up to four voices, edit their harmonies and single pitches, control playback speed, and convert audio to MIDI.

www.timespace.com

PRODUCT UPDATE

Equator Audio Research Q8

San Diegan studio reference monitor manufacturer Equator Audio Research is shipping its two-way active Q8 studio reference monitor, featuring an eight-inch woofer and one-inch compression horn driver.

www.handinhand.uk.net
www.equatoraudio.com

NEW PRODUCT

Terratec Electronics iQuader

Developed in collaboration with Braunder Microphones, the Terratec iQuader is purportedly the world's first USB stereo interfacial microphone, and features a built-in mic pre-amp and fast-acting analogue filter for fast, simple recording.

www.terratec.co.uk

www.terratec.net

NEW PRODUCT

Digidesign Transfuser Preview

Digidesign has unveiled Transfuser Preview, a free three-month pre-release version of Transfuser, an upcoming RTAS real-time loop, phrase, and groove creation virtual instrument plug-in for Pro Tools.

www.digidesign.com

PRODUCT UPDATE

VSL VIENNA ENSEMBLE 3

Vienna Symphonic Library (VSL) has introduced Vienna Ensemble 3, the first MIDI and audio LAN solution that enables users of its Vienna Instruments to set up a cross-platform network of Macs and PCs using an Ethernet cable.

www.timespace.com

www.ilio.com

NEW PRODUCT

Softube Acoustic Feedback Deluxe

Softube is shipping Acoustic Feedback Deluxe, a TDM plug-in featuring harmonic and sub-harmonic selectors, adding a sub-harmonic growl and more detailed control of timbres.

www.softube.com

PRODUCT UPDATES

Yamaha 01V96VCM, 02R96VCM

Yamaha Corporation of America has relaunched its 01V96V2 and 02R96V2 Digital Mixing Consoles as the 01V96VCM and 02R96VCM; retail pricing remains unchanged, as does the powerful V2 features, but the new models come complete with a host of pre-installed VCM effects that were previously only available as 'add-on' effects packages. These effects are based on Yamaha's Virtual Circuitry Modelling technology, simulating the model's original analogue circuitry – right down to the last resistor and capacitor. Included are an array of 70 vintage-sounding classic compression and EQ units, simulations of several analogue open reel recorders, plus a complete suite of REV-X reverb effects, a high-quality surround post-production package, and even a selection of vintage stomp boxes.

Customers who purchased a 01V96V2 or 02R96V2 from January 1, 2008, onwards are eligible to receive a free update CD.

Yamaha Music (UK)

+44 (0)1908 366700

Yamaha Commercial Audio Systems

+1 714 522 9011

www.yamahaproaudio.com

NEW PRODUCT

Blue Microphones Snowflake

Blue Microphones has introduced the Snowflake, effectively a portable version of its popular Snowball Professional USB Microphone, combining a USB bus-powered capsule with a class-compliant design for true plug-and-play on Mac and PC computers. The mic itself folds into a compact case that also houses a USB cable to aid transportability; unfolded, the case itself serves as a desktop stand or a laptop clip – perfect for podcasting, webcalling, or song sketching on the go.

Blue Microphones

www.bluemic.com

NEW PRODUCTS/UPDATE

CEDAR Declick for NOA, CEDAR Dehiss for NOA, CEDAR for SADiE

Cambridgeshire-based audio restoration hardware and software specialist CEDAR Audio, and archive audio specialist NOA Audio Solutions, have announced availability of CEDAR Declick for NOA and CEDAR Dehiss for NOA, respectively based upon CEDAR's Declickle and Auto Dehiss algorithms. CEDAR Audio has also licensed Prism Sound to resume sale and support of CEDAR for SADiE.

CEDAR Audio

+44 (0)1223 881771

CEDAR Audio USA

+1 207 828 0024

www.cedaraudio.com

PRODUCT UPDATE

Apple iMac

Apple has updated its all-in-one iMac desktop computer line, with the 24-inch flagship model's build-to-order options including a 3.06GHz Intel Core 2 Duo processor, up to 4GB of DDR2 SDRAM, NVIDIA GeForce 8800 GS graphics card with 512MB of video memory, and up to a 1TB Serial ATA drive. Standard features include built-in AirPort Extreme 802.11n Wi-Fi networking; BlueTooth 2.1+EDR; Gigabit Ethernet; built-in iSight video camera; five USB 2.0 ports; and single FireWire 400 and 800 ports.

Apple (UK)

+44 (0)845 600 1683

Apple

+1 408 996 1010

www.apple.com

NEW PRODUCT

Dangerous Music DAC-ST

Edmeston, New York-based DAW-based recording product designer/builder Dangerous Music, is shipping the DAC-ST Additional Switching System, a mastering-quality, stereo digital-to-analogue converter option for its Monitor ST controller. All four rear panel-sited digital inputs accept AES or SPDIF formats, and have active Thru outputs for routing these input signals to other devices.

Dangerous Music (European Division)

+49 2236 393731

Dangerous Music

+1 607 965 8011

www.dangerousmusic.com

LONDON

Dolby Demystified By Dolby And Scrub

HHB Communications' London-based post-production specialist division, Scrub, has teamed up with Dolby UK to host Dolby Demystified, a free event being held (twice) on July 2, at the cinema in West London's Kempinski Courthouse Hotel to help post-production and broadcast personnel with a good basic knowledge of surround audio post to successfully deliver programmes using Dolby E.

Scrub – A division of HHB
+44 (0)20 7025 6020
www.hhb.co.uk/scrub

PRODUCT UPDATE

Merging Technologies Pyramix 6.0

eMerging, Merging Technologies' London-based UK distributor, is celebrating the launch of Version 6.0 of the latter's Pyramix Native DAW by offering a temporarily discounted price of £499 (including VAT) until August 31, 2008.
www.merginguk.com

MUMBAI

Munro Mixes For Shree Lakshmi

London-headquartered recording facility builder Munro Acoustics has designed and specified a brand new 5.1 cinema mix room (Shree Balaji Studio) for Shree Lakshmi Studios in Mumbai's Andheri media district. The room is fitted with a 192-channel Harrison MPC4-D digital film console; Dynaudio M3FX screen – custom made for cinema mix rooms; ten Dynaudio BM15P for the surrounds; plus two JBL 4645Cs for the LFE channel, all driven by MC2^2 amplification.

According to studio owner R K Jain, Munro Acoustics was an obvious choice when it came to completing the work: "I read the following paragraph in the Dolby Guide for 5.1 rooms while planning the facility: 'Whether designing a new facility or planning to refit an existing one, consulting a professional acoustician and architect familiar with building critical audio monitoring environments is always recommended.' I decided to go with an experienced acoustic design firm who have worked on world-renowned mix rooms, so briefed Andy Munro of Munro Acoustics to design a room with superior sonic quality."

For his not inconsiderable part in the proceedings Munro stated, "The new room has been designed to meet the stringent requirements of a Dolby Premier Studio in preparation for the new generation of high-definition digital projectors. The acoustic design is modelled on a form of semi-diffusing module that has been developed over many years' experience with top London studios, such as Shepperton and Pinewood."

Munro Acoustics
+44 (0)20 7403 3808
www.munro.co.uk

NEW PRODUCT

Ueberschall Score FX

Billed as being the definitive plug-in for fast, quality film-scoring results, Ueberschall's ScoreFX Cinematic Sound Design software provides 7GB of accents, beds, and rhythms encoded for use with the company's Liquid Player VI engine co-developed with Celemony Melodyne technology, so no additional sample player is needed. 28 one-minute so-called construction kits rich in textual design and contrast complete the useful package.

Time+Space Distribution
+44 (0)1837 55200
www.timespace.com
Big Fish Audio
+1 661 295 0761
www.bigfishaudio.com

UK

Tekcare Tours Fairlight

Two-time BAFTA-winning sound designer Cliff Jones is demonstrating Fairlight technology at York University Music Research Theatre (June 11), London's British Film Institute (June 19), Birmingham's The Audio Suite (June 24), and Yorkshire TV in Leeds (June 25).

www.tekcare.co.uk

COMPROMISE IS NOT A VIRTUE

APx525 and APx520 two channel audio analyzers, new from Audio Precision, the recognized standard in audio test.

One-click measurements, automated sequences, and the intuitive UI of the award-winning APx Series, with –108 dB typical THD+N and new tests for two channel applications. No other audio analyzer is faster or easier to use.

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diary dates

June 11-12
ABTT Theatre Show
Vincent Square, London

June 14-20
Infocomm/NSCA Conferences
Las Vegas, USA

June 17-20
BroadcastAsia 2008
Singapore

June 20-22
NAMM Summer Session
Nashville, USA

June 23-26
Cinema Expo International
Amsterdam, Netherlands

June 28-30
AVL Thailand
Thailand

July 8-10
PALME Asia
Suntec, Singapore

July 17-20
Develop
Brighton, UK

August 21-23
Palmm Philippines
Manila, Philippines

August 24-25
PAL Showcase 2008
Toronto, Canada

August 28-30
AES Conference
Jeju Island, Korea

September 7-10
PLASA 2008
London, UK

September 11-16
IBC 2008
Amsterdam, Netherlands

September 25
The Conch Awards
London, UK

SWITZERLAND

Winning Studer Waves Goodbye

Swiss pro audio specialist Studer has discontinued production of its OnAir 1000 and 2000 digital mixing consoles – largely because of electronic components being unavailable in RoHS (Restriction of Hazardous Substances) compliant versions – with the last OnAir 2000 leaving the Regensdorf factory more than a decade after the first. Introduced in 2000, the OnAir 1000 delivered the same attributes as its bigger brother for small- to mid-sized radio installation, with almost 1,000 units being delivered during its production run.

Meanwhile, Swedish state broadcaster Sveriges Television AB (SVT) has taken delivery of its fifth Studer Vista 8 Live Production and Broadcast Console for installation in its flagship live-audience Studio 1 in Stockholm, where it will be used on the country's most popular entertainment shows.

On another positive note, Studer's Call Management System (CMS) recently received a Cool Stuff Award at this year's NAB (National Association of Broadcasters) Show in Las Vegas from *Audio Media*'s sister publication, *Radio World*.

Studer UK
+44 (0)1707 668097
Studer USA
+1 818 920 3206
www.studer.ch

NEW PRODUCT

iZotope ANR-B

Boston, Massachusetts-based research-driven audio signal processing company iZotope has launched the ANR-B Adaptive Realtime Noise Reduction unit, bringing its renowned audio algorithm for adaptive noise reduction to a dedicated hardware unit for use in real-time broadcast applications where it can intelligently identify and suppress environmental broadband noise, hum, phone line artifacts and more, dramatically increasing the quality of audio broadcasts involving radio call-in programmes and on-location broadcasting.

iZotope
www.izotope.com

CHINA

Euphonix Broadcasts From Olympian Heights

Chinese broadcaster CCTV recently used a Euphonix System 5-B for a live broadcast of the Olympic torch's ascent to the summit of Mount Everest. Here the crack climbing team of five torchbearers passed the flame to team captain Nyima Cering, who was heard breathlessly proclaiming the 2008 Olympic Games slogan: "One world, one dream."

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www.euphonix.com

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PORTUGAL: Audiolog, Ldá . www.audiolog-lda.com
ROMANIA: A.V. Audio Sys s.r.l. . www.avaudiosys.ro
RUSSIA: 4Sonic . www.4sonic.ru
SERBIA, MONTENEGRO: Artist d.o.o. . www.artistsystems.co.yu
SLOVAK REPUBLIC: Sound Service . www.soundservice.sk
SLOVENIA: MTD . www.mtd-el.si
SPAIN: Microfusa . www.microfusa.com
SWEDEN: Fitzpatrick Import Group S.A. . www.fitzpatrick.se
SWITZERLAND: Music Network GmbH . www.musicnetwork.ch
TURKEY: BL Muzik Co. Ltd. . www.blmuzik.com
UKRAINE: Real Music Ltd. . www.realmusic.ua
UNITED KINGDOM: Synthax Audio UK Ltd. . www.synthax.co.uk

Asia and Pacific Rim
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CHINA: Central Music Co. . www.centrmus.com
HONG KONG: Central Music (HK) Ltd. . www.centrmus.com.hk
INDIA: Modi Digital Audio Pvt Ltd. . www.modidigital.com
JAPAN: Synthax Japan . www.synthax.jp
KOREA: Soundcat . www.soundcat.com
INDONESIA: M-Station . www.m-station.biz
THAILAND,KAMBODIA, MALAYSIA: KDM Trading Co Ltd . www.kdm.co.th
TAIWAN: MidiMall Inc. . www.midimall.com.tw

Middle East
ISRAEL: Music-Shop LTD . www.music-shop.co.il
UAE, EMIRATES: Thomsun Trading Est . www.thomsun.ae
IRAN: Raajmaan System Ltd. . www.raajmaan.com

Africa
SOUTH AFRICA: Tuerk Music Technologie . www.tuerkmusic.co.za
All other countries: Please check www.rme-audio.com

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124th AES Review

While its organisers admitted that this year's AES Pro Audio Expo & Convention in Amsterdam (May 17-20) "...was a bit smaller than in recent years," attendance apparently almost mirrored that of last year's event in Vienna (6,200). Nevertheless, a number of notable products received their first European airings. And here they are...

AEA Microphones launched a new and 're-imagined' version of the RCA 44 ribbon microphone, claimed to have a 6dB lower noise floor and more detail than the original.
www.wesdooley.com
According to Product Manager Thomas Stubics, **AKG Acoustics**' AES-launched C 214 "...was designed as a budget-friendly alternative to the leading-edge C 414 family; because the C 214 uses the same one-inch diaphragm as the C 414, the essence of that heralded C 414 has been captured in this newest model." The C214's road-tough construction is based around a dent-resistant metal grille that ensures high RF immunity without affecting its acoustical performance, plus a gold-plated XLR-type output.
www.akg.com
ATD2 displayed and demonstrated the XMG2.D, the largest (1.0m H x 0.82m W x 0.45m D) active FAR-branded monitor built by the Belgium-based manufacturer to date, boasting an impressive 15Hz to 35kHz frequency response from its two woofers (driven by two 800W Class D amplifiers), single mid-range driver (driven by a 200W Class D amplifier), and tweeter (driven by another 200W Class D amp), all time-aligned via onboard DSP to obtain a "...perfect impulse response."
www.atd2.com
Audio test and measurement equipment specialist **Audio Precision** unveiled two-channel models of its award-winning APx500 Series audio analyser: the APx525 has two balanced and two unbalanced analogue inputs and outputs, plus 192kHz digital I/O, while the APx520 drops the digital I/O.
www.ap.com
CB Electronics showed its new P2-MMC2 USB MIDI-RS422 Video timecode interface to help MIDI-based editing systems communicate with the video world. The unit can be used for either inwards or out-going video control, with track arming and so on.
www.cbelectronics.co.uk
CharterOak Acoustic Devices expanded its product line to include the SCL-1 Solid State Compressor/Limiter, an all-discreet stereo compressor/limiter that received its first airing alongside the Enfield, Connecticut-based company's new Small Studio Collection, comprising an SA538 vacuum tube condenser, E700 solid-state condenser, and a sequentially-numbered matched pair of M900 small diaphragm condensers.
www.charteroakacoustics.com
DPA Microphones showcased its acoustically pre-equalised 4080 miniature cardioid lavalier microphone – designed to be body-mounted around 20 to 25cm from the mouth, and featuring a 4dB presence boost to improve speech intelligibility and definition, as well as its new 4017, a short (210mm body length) and exceptionally lightweight (71g) shotgun microphone offering a highly directional pickup pattern.
www.dpamicrophones.com
JZ Microphones launched a new addition to its Black Hole series (though this time it's dark green...) – a cardioid-only version with 20dB pad. Also new was the 'Pop and Shock' package (pop filter and shockmount for the Black Hole microphones).
www.jzmic.com
Lawo launched its latest MC2 console at AES – the MC2 56. The console offers a more compact approach than previously, with smaller 16 fader modules, fewer user-definable controls, and touch screen implementation
www.lawo.de
Merging showed its new V6.0 Pyramix platform with MassCore technology (increased power using dedicated host PC processing core) and the new ADR Package for full ADR and Foley session control and administration using both the Pyramix and VCube products.
www.merging.com
Microtech Gefell launched several new microphones at the show. First was the new 'ART' anniversary series, which takes the M930 and M990 microphones and puts a PVC membrane into the capsule for a vintage sound. Also new was the UM930, a version of the M930 with five switchable patterns, and the M930 twin – a dual-diaphragm, dual output microphone.
www.microtechgefell.de
Minnetonka Audio Software announced the latest version (v1.4) of AudioTools AWE, its automated workflow engine for editing, format conversion, encoding, plug-in processing, and processing through external I/O devices, adding .AU and W64 file support, intelligent file handling on Folder Drop, plus optimised parsing of MP3 files for playback.
www.minnetonkaaudio.com
Neumann celebrated its 80th anniversary with the launch of the TLM 67, based on the well-loved 1960s-vintage U 67 – incorporating the same K 67 capsule, for example, but with newly-designed circuitry that closely reproduces U 67 characteristics without the use of tubes; switchable directional characteristics (omni-directional, cardioid, and figure-of-eight), selectable 10dB pre-attenuation, and a high-pass filter allow detailed adjustments to be made according to recording applications.
www.neumann.com
Neyrinck Software announced its new V-Mon plug-in for Pro Tools – a fully-featured surround monitoring system that can be controlled with dedicated TAC System hardware. It handles up to six 7.1 and eight

stereo inputs, and has two downmix facilities for monitoring and program.

www.neyrinck.com

Prism Sound announced an upgrade to its Orpheus FireWire multi-channel audio interface that enables its audio outputs to be converted to ADAT outputs, and vice-versa, thereby allowing it to be connected directly to a number of DAWs, including Digidesign Pro Tools LE.

www.prismsound.com

RME showcased its brand new HDSPe MADIface, purportedly the world's first and only MADI interface for laptops, based on an ExpressCard capable of handling 64 (I/O) audio channels at 192kHz with a 250MB/s transfer rate in both directions.

www.rme-audio.com

Schoeps demonstrated its new 'Microphone Show Room' – a Flash-based application at the Schoeps website that demonstrates and compares various microphone techniques and capsules, complete with audio. Also new was a new suspension mount for the CCM series, overcoming the problem of low mass in the microphone itself.

www.schoeps.de

Stage Tec showcased its new TRIAGON multi-client-enabled audio server, supporting up to 128 inputs and 128 outputs, plus 84 assignable buses, controllable from the operating console, an 8x8 fader remote unit, or laptop computer via Ethernet or WLAN; the German company also showed the AURUS Wireless Virtual Fader Unit – a software application running on a dedicated touch-screen tablet PC that serves as a roving remote control, offering eight additional fader control channels for the AURUS Direct-Access Console when networked via WLAN – and XCMC board, squeezing all the control and audio processing hardware for the AURATUS compact digital console onto a single board that slots into a standard NEXUS 3U base unit.

www.stagetec.com

Independent UK broadcast systems integrator **TSL** showed the AMU1-3G, its new multi-standard, multi-format rack-mount audio monitor offering intuitive and compact metering of Dolby E bit streams from HD/SDI video formats up to and including the latest HD standard 1080p at 50Hz. TSL also showed a new line of cost-effective rack-mount monitoring units – the MPA range. Starting at around £300, the range includes passive and active monitoring units with various metering and input options.

www.tsl.co.uk

TubeTech showed a new modular rack frame system for eight modules. Current modules are the PM1A mic pre, the CM1A compressor, and the EM1A EQ.

www.tubetech.com

Celebrating a decade since Bill Putman Jnr. re-founded **Universal Audio** to revive classic products, the Californian company announced the 1176AE (Anniversary Edition) of the legendary limiting amplifier, and also announced the 710 Twin Finity Tube • Solid State • Tone-Blending pre-amp with dual signal paths centred around a phase-aligned Tone-Blending knob that is continually variable from 100% tube to 100% solid state, offering easy access to multiple pre-amp tones.

www.uaudio.com

whatsupuk@audiomedia.com

DABbling In The World Of UK Radio

Put down those pens and tuck away the fond clichés, DAB's obituaries are not to be scribbled out just yet…

Digital radio had a terrible start to the year. Three national DAB stations closed, a pessimistic report stated that the industry had not prepared the market for this new form of listening, and a big radio group more or less turned away from the technology. But the situation has improved; the number of people listening to DAB rose by ten percent during the first quarter of this year, and ownership of the right kind of receiver was up 40 percent on last year.

This suggests that although UK commercial broadcasters, after following the lead of the BBC and becoming part of the first wave of DAB in Europe, were succumbing to the jitters, the consumers had at last come to love digital radio. A friend of mine sent me a message back in March along the lines of, "What's going on? Digital is the way ahead."

Certainly that has been the view of Ralph Bernard, who, while still Chief Executive of GCap Media, last year threatened to remove the group's stations from DAB multiplexes unless broadcasting regulator Ofcom made a firm decision on turning off analogue radio frequencies. Bernard is a staunch supporter of digital radio, shown by his now being Chairman of multiplex operator Digital One, so many considered the threat to be empty.

His successor at GCap, the even more forthright and verbally unrestrained Fru Hazlitt, was brought in to not only shore up the business but fend off a hostile takeover bid from Global Radio, the company formed by ex-ITV boss Charles Allen to buy Chrysalis Radio in August 2007. Hazlitt branded DAB 'not economically viable', identifying broadband and FM as the way ahead for GCap.

The group had already shut down new music channel The Core in January, around the same time Channel 4 and UBC Media closed Oneword. Less than a month later Hazlitt announced the demise of The Jazz and Planet Rock, although the latter is still on air while discussions progress with a potential buyer. The group further distanced itself from DAB by arranging to sell its majority stake in the national commercial multiplex, Digital One, to the minority shareholder, transmission provider Arqiva.

Digital was not the sole casualty in GCap's overhaul; the Xfm analogue licences in Scotland, South Wales, and Manchester were also to be disposed of in an attempt to trim back the group's operations and outlay. All radio companies suffer from the vagaries of the advertising market and have had to pay out even more to sustain DAB transmission networks as well as FM and AM.

This point was made in The Future of Digital Radio, a report published during January by Enders Analysis. It quoted figures of £15 million a year to run a digital station, compared to £8 million a year for analogue. The report's author, Grant Goddard, observed that commercial DAB has been struggling since the late 1990s, and while the industry now knows a problem exists, there was a lack of confidence in the business being able to sustain two national DAB multiplexes.

Uncertainty over when that second multiplex, to be run by Channel 4 and various media partners as the 4Digital Group, goes on air has done nothing to quell doubts. At least six channels were due to start broadcasting by July but there is speculation that a solitary service, E4 Radio, will not appear until later in the year. The building of new radio studios at C4's headquarters in Victoria, London, has been put on hold, although, apparently, interim facilities have been given the go ahead. C4 was contacted several times for clarification but the requests remain in voicemail hell.

The launch of new digital-only channels is clearly a positive move. Mandy Green, head of communications at the Digital Radio Development Bureau (DRDB), points out that, as with analogue radio, there has always been a turnover of stations in the digital domain; some are around for a while and may be successful, but ultimately many will disappear to make way for new services.

This is a valid point but although new local multiplexes are opening, the recent closures, coupled with further rumours that 4Digtal might take vacated slots on Digital One before "Digital Two" is in place, just add to the not-quite-all-there image that has plagued UK DAB since its launch in 1995. Back then there were few services, mostly simulcasts from the BBC, and no receivers.

The receiver problem, and a lack of new, original programming, held back the general acceptance of digital radio until the beginning of this century. Recent figures for digital radios show a marked increase in ownership, up 40 percent on last year. The number of receivers sold has topped seven million, with 17.8 percent of listeners tuning in digitally; DAB accounts for 10.8 percent of that total, the remainder made up by digital terrestrial television and the internet.

Mandy Green hopes these figures will counter the 'hysterical headlines' of earlier in the year when obituaries were being prepared for DAB. Radio is a volatile business anyway; Global has succeeded in its bid for GCap and Fru Hazlitt is back on the job market. The deal was due to be completed by 6th June and a Global spokeswoman said details were not being given at this stage about Global's plans for digital. As the sale of GCap's Digital One share to Arqiva was put on hold until the Global deal was completed, the new owner will now have to decide what to do with the multiplex.

All of which shows that while there have been more positive developments in digital radio in recent months, the uncertainty that has dogged DAB throughout its existence just will not go away.

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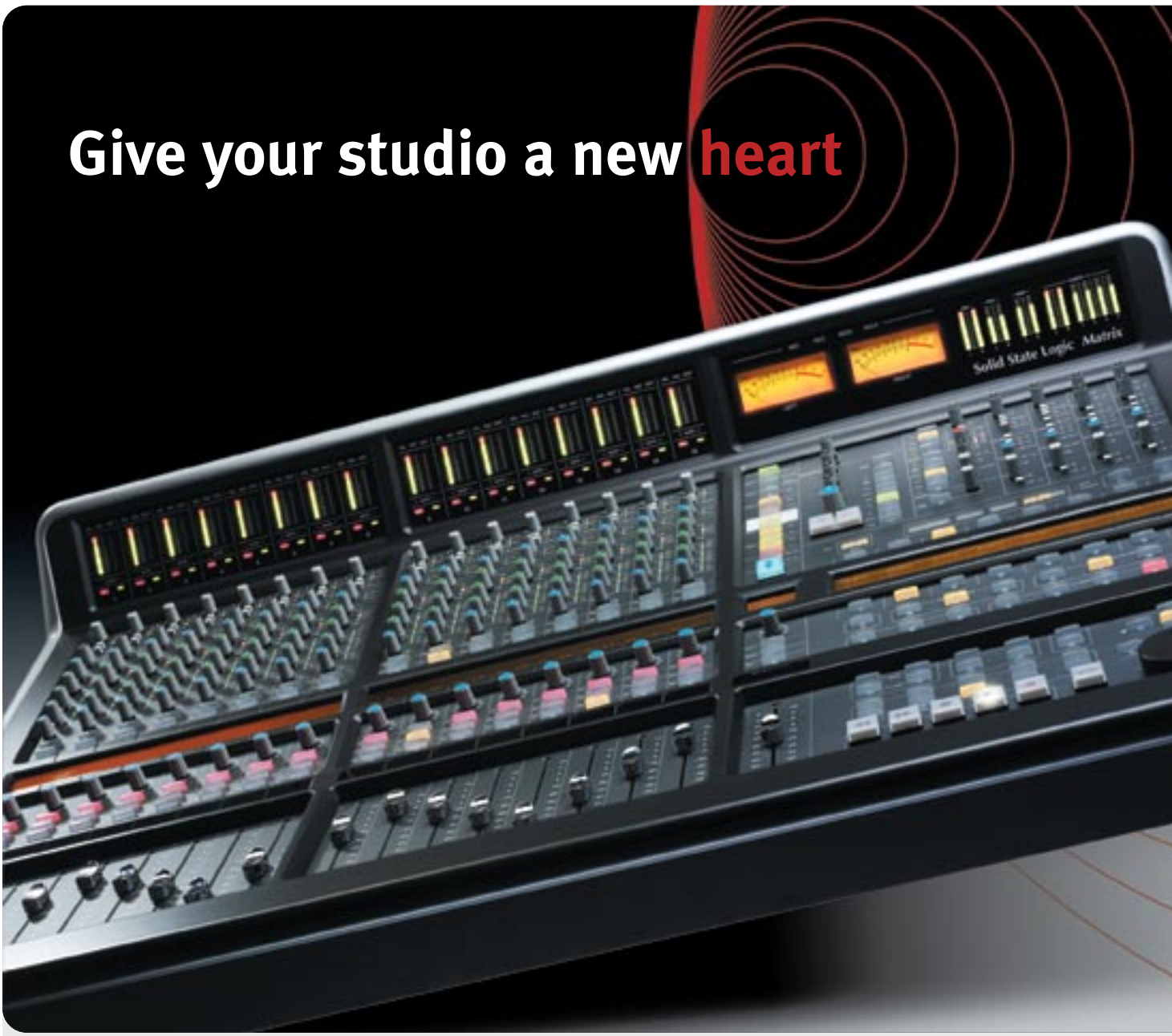

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Sydney Complex Embraces Latest Technology

Entrepreneur Justin Hemmes has opened the luxurious $150 million Sydney leisure complex, The Ivy – a flagship for the Merivale Group of hotels and bars, to which he is the heir.

Located in the city centre, The Ivy had its soft launch in December 2007 and in the Spring of 2008 moved into full operation, with a series of restaurants, bars, cocktail lounges, and live music.

The complex features 14 bars, nine restaurants, boutique hotel, swimming pool (with a dance sound system), gardens, penthouses, nightclub, cafes, delicatessens, ballroom, office space, and retail outlets. It also houses a 1,000-capacity function room, and can cater for up to 3,000 people in total at any one time.

Providing an audio network that would place more than 40 zones on the same backbone presented an exacting task for system integrators Avsound Productions Pty. Installation Contracts Manager, John Collyer, opted for Soundweb London DSP devices from BSS Audio.

Avsound's approach was to design a system with the best product for each part of the project; they also offered an in-house hire option for the Ballroom with 24-hour back up.

One of the decisions taken at an early stage was to construct the audio transmission around BSS Audio architecture. "We use BSS in many of our installations and have always received great support from both BSS and Jands [the Australian distributor]," said Kline. "We are familiar with the BSS family, and as this would be driving the entire system we didn't want to risk other products."

The site-wide project contains four control rooms, with four 45RU racks in each. A total of 19 Soundweb London digital processors have been deployed; these comprise BLU-80 configurable processors and BLU-32 input/output expansion devices in the first three racks, with a combination of the new BLU-800 and BLU-160 devices later forming the final rack.

DPA For World's Rarest

DPA Microphones' Australian distributor Amber Technology has supplied a DPA 3506 stereo kit to the Australian Chamber Orchestra for use with a very special instrument: one of the world's rarest violins.

The Carrodus, created by Giuseppe Guarneri del Gesù in 1743 and valued at AUD$10m (approx EUR€ 6m), is among the finest violins in existence, being one of only 100 del Gesù violins in the world today. It has been acquired by an anonymous Australian private benefactor for the use of the ACO's Artistic Director Richard Tognetti.

"The ACO is proud to own a stereo pair of these exemplary 4006-TL mics," says Tognetti. "I have personally tried many different set-ups and without doubt these DPAs pick up the inherent warmth and clarity of my del Gesù violin."

Klotz Digital Appoints TAG

Klotz Digital has appointed Technical Audio Group (TAG) as exclusive Australian distributor for its Varizone range of products.

"Klotz Digital put great effort in research and development to adapt the technology to the particular specifications and requirements this sector demands," said Patrick Salloch, Klotz Digital Asia Pacific's General Manager. "Appointing TAG in Australia is part of Varizone's worldwide recognition that commercial audio is a specialist market with specialist demands that requires specialist products and specialist distribution. The experts at TAG are the perfect distribution partners for us in Australia because they know the commercial market, have strong technical support, and have firsthand experience of high end digital systems."

"This is a very important day in TAG's history," commented TAG's Sales Manager Ian Woodhouse. "We are extremely gratified to have a company of Klotz Digital's standing endorse TAG in this way. The level of technology and expertise is remarkable and we feel it will offer consultants and installation contractors alike unique solutions to the complex challenges for audio in small, medium to large scale venues and buildings."

Best Sound From Music & Effects

Melbourne's Music and Effects scooped the award for Best Sound in the Feature Film category for *Noise* at the latest AFI Awards. The AFIs are Australia's premier film and television awards, and these accolades follow similar honours for Music and Effects at the Australian Screen Sound Guild Awards and Inside Film Awards.

The sound design, mix, and automatic dialogue replacement were brought together and completed by Music and Effects' team: Emma Bortignon (Sound Designer), Doron Kipen (Mixer), and Philippe Decrausaz (Sound Recordist). The main mix for *Noise* was done utilising their Fairlight dual Fame digital audio system.

MEDIA MATTERS

Australia's media scene is creatively, technologically, and economically advanced. There is a tradition of public broadcasting, but privately-owned TV and radio enjoy the lion's share of listening and viewing.

Ownership of print and broadcast media is highly-concentrated. For example, four major media groups own 80% of Australia's newspaper titles.

The Australian Broadcasting Corporation (ABC) runs national and local public radio and TV stations as well as Australia Network, a TV service for the Asia-Pacific region. The other main public broadcaster is the Special Broadcasting Service (SBS), whose radio and TV networks broadcast in many languages.

National commercial TV is dominated by three large networks. Commercial broadcasters have to carry a minimum percentage of Australian-made programming. Pay-TV services have gained a substantial foothold. Digital TV is available terrestrially, as well as via satellite and cable.

Sport, news, game shows, imported and home-made dramas top the TV ratings in Australia. The industry has successfully exported some of its productions to English-speaking markets overseas. More than 70% of Australians use the Internet.

The John Howard government changed the regulations governing media ownership. The rules, introduced in 2007, allow for greater cross-ownership of press and TV outlets as well as higher levels of foreign ownership.

VITAL STATISTICS

FULL NAME	Commonwealth of Australia
POPULATION	20.7 million (UN, 2007)
CAPITAL	Canberra
LARGEST CITY	Sydney
AREA	7.7 million km^2 (2.9 million miles^2)
MAJOR LANGUAGE	English
MONETARY UNIT	11 Australian dollar = 100 cents
MAIN EXPORTS	Ores and metals; wool, food and live animals; fuels, transport machinery and equipment
GNI PER CAPITA	US $32,220 (World Bank, 2006)
INTERNET DOMAIN	.au
INTERNATIONAL DIALLING CODE	+61

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Soundwaves Refurbishes With Fairlight

Melbourne post house is one of the first to invest in Xynergi. JIM EVANS reports.

Sydney-based Fairlight can fairly be billed as a digital pioneer with over thirty years in the field. It developed audio sampling, music sequencing, and other key technologies used in today's industry. Last year, 2007, the Fairlight team unveiled – at IBC in Amsterdam and AES in New York – its latest invention: Xynergi, billed as 'the world's first unified media production centre'.

As part of a major refurbishment, one of Melbourne's leading sound post-production facilities, Soundwaves, is installing two CC-1 powered Constellation film mixing consoles and a Xynergi Media Production Centre. The latest Fairlight technology in the hands of the accomplished Soundwaves team is a combination that will result in one of the most technically capable and creative sound post-production facilities in Australia.

Fairlight is providing Soundwaves with a completely integrated workflow solution that will cater for the most demanding projects, supporting up to 230 channels of mixing in all formats – up to 7.1 for cinema, with full HD digital picture. The inclusion of a Xynergi Media Production Centre will further enhance Soundwaves ability to deliver high quality audio finishing in all mixing rooms.

Soundwaves Director Andrew McGrath comments, "We've long searched for a truly effective and comprehensive system that complements our focus on delivering sound mixes to the highest creative and technical standards. The innovative Fairlight technology and its vast user-friendly capabilities will significantly enhance our ability to provide great results for our clients."

Fairlight's Sales & Marketing Director Stuart DeMarais says, "This is a very exciting project for us to be involved in. Soundwaves is a multi award-winning facility with a focus on the quality end of the market. We've worked closely with them to specify and deliver what will be one of the most modern and sophisticated film sound facilities in Australia."

Soundwaves was established in Melbourne, in 1994 by Peter and Heather Walker, and is one of Australia's most highly regarded sound post-production facilities. In 2005 Andrew McGrath rejoined Soundwaves as CEO and significant stakeholder, bringing a wealth of sound experience.

McGrath continues, "With a focus on delivering sound mixes that add significant value for clients by employing creative sound techniques to enhance both the story and visuals, the Soundwaves' team always aims to provide a positive and collaborative client experience. Word of mouth marketing alone has made Soundwaves a favourite amongst film makers and television producers – and resulted in solid growth of Soundwaves' client base. The Soundwaves' team has also received significant recognition from their industry peers with multiple film and television sound awards. With solid bookings ahead, including major feature film productions, the forthcoming refurbishment that will incorporate the latest Fairlight equipment is an exciting time for Soundwaves and their clients. Soundwaves is looking forward to a big, bright, widescreen future."

The Xynergi technology is now being embraced by a growing number of facilities worldwide – including Sonacom, a post production specialist that counts major French broadcasters and advertising agencies among its clients – which has installed Xynergi desktop media creation systems in each of the four 5.1 sound studios at its facility in Neuilly sur Seine.

So, how will this new technology affect the way studios work and who will benefit most from it? "Right now Xynergi will benefit Fairlight users in the main," says Fairlight's Andrew Bell who has been closely involved in the development of this project. "It gives them an improved user interface, from which they can perform audio editing and mixing more efficiently than previously. It's more compact than Fairlight's previous controllers, yet provides more functionality, and is easier to learn because of the self-labelling keys and the built-in Xplain system."

ADDRESSING THE GREEN ISSUES

Fairlight recently published the environmental benefits delivered from its Crystal Core technology platform (CC-1). The "Green" Whitepaper provides some background regarding Fairlight's 'green' computing initiatives and explains why Fairlight's Crystal Core technology is well positioned at the forefront of this important movement, says the company.

"By introducing the CC-1 platform, Fairlight has taken a modern approach to deliver the acceleration required for power hungry media processing applications", says John Lancken, Fairlight's CEO. "By utilising newly available technologies in the form of latest generation FPGAs, Fairlight has proven that there are massive savings in terms of power consumption, heat generated, and component costs, all of which provide a direct benefit in terms of carbon reduction."

"The world's demand and appetite for higher performance computing is on the increase. The environmental issues relating to this increase must be addressed today. Many technologists believe the role of application acceleration co-processors such as Fairlight's CC-1 may provide the answers we are looking for. The future is in our hands."

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The Dilemma Of Personal Miking

Considering I've spent 25 years in broadcasting I've got surprisingly few really good celebrity stories. However, Sam Fox and the leather jump suit is one of them. And if you have an hour to spend and the price of a drink, I'll gladly tell it to you. Suffice to say, it illustrates the dilemmas of attaching personal mics where there is no visible – or indeed invisible – means of support.

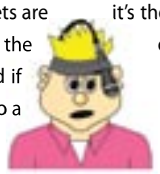
Of course in theaters they've been getting round this for years by sticking mics to any decent bit of face or forehead. And while the talent may turn up without bra or tie, they rarely appear without a head.

I always thought it a little odd that in an effort to get mics out of shot in TV we would stick them on presenters where you could see them in every shot, but there you are. The mics got smaller and the clips got neater, and now on a dark suit you will barely see a well-positioned mic.

However there's still the problem of movement. If presenters aren't looking left to right, then they're dropping their heads to read the script, and quite significant changes in level are par for the course. And an untutored contributor can easily bang, scrape, and rustle their microphone all the way through an animated interview. So what about a headworn microphone? What indeed.

In radio we don't really care what stuff looks like – hence the lip mic – and so head and breast sets are regularly deployed. I was so impressed with the Audio Technica M50 headphones, I wondered if their AT 892 headworn mic could be fused into a flexible high quality solution. And the answer is... yes and no. Presenters found the concept of separate headphones and mic unworkable – it's a stupid idea really - but the mic itself is tops. In fact it's a great solution to applications where personal mics are not delivering repeatable results. It's an under-the-ear fitting with enough flexibility to clamp on to lobeless ears – funny how the shape of people's ears becomes important all of a sudden. And the 892 delivers consistently high quality sound.

Having bought a couple of them for my local church I found myself having to use 'the Britney' mic as it is popularly styled. For the first ten minutes you feel awfully self-conscious. But after that, you forget that it's there – unless of course you find yourself in front of a full length mirror. In which case pout, pose, and hit me baby one more time.



ALISTAIR MCGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

The Ten Commandments Of Sound

I've been in an annoyingly reflective mood of late: annoying for anyone who's had to listen to me rabbit on about business plans and strategies forward. I've not quite taken to wearing a pin striped suit but it's come close. The question has been quite profound. Am I a creative person, or a business person?

It all came about over lunch, as these things often do. I was filling my face courtesy of a friend and business acquaintance who pronounced, "It's a good job you turn out good work, because you're crap at the business side of things." He then proceeded to give me a two hour pep talk on running a better, fitter, more profitable company. So began a process of self analysis that's culminated in a new super-shiny Media Mill Business Plan 2008.

Things all got a little deep until I realised a few key things: that I like the hands on work that I do: playing with sound, whether it's recording on location or mixing in the studio. That's why I get out of bed in the morning (that and taking the kids to school).

So to calm myself down a little (I'd been annoying everyone with my new, thrusting, business demeanour) I sat down and created my very own Ten Commandments that would draw a line under things:

1. Quality in everything. You're only as good as your last project.
2. Never stop looking for new work. There has to be a project after this one.
3. Look out of the business more than in. Stop worrying about that new soundcard having the right drivers and think about how it might earn some cash.
4. Keep our blagging exploits to ourselves. Telling people you got that new studio kit for a knock down price makes you look cheap.
5. Share the communication with customers. Everyone has to answer the phone or you look like a one man band.
6. Don't undervalue our work. There's always someone who'll do it for nothing, so sell on quality, not cost.
7. Don't turn down small jobs. They bring in extra cash and may lead to greater things.
8. Be diverse. We all have different skills, from editing sound to writing copy. Make them pay.
9. No fiddling or technical stuff after 4pm. Things break more easily the closer to home time. Leave that software update/shelf fitting until the morning.
10. Enjoy it. If you're not having fun in sound, go be an accountant.

Amen.

JERRY IBBOTSON runs Media Mill, a York-based audio production company started in 2000 that specialises in sound for video games. Prior to this, Jerry was a BBC journalist for ten years, ending his spell with the Beeb as a reporter and newsreader at Radio One Newsbeat.

SOMETHING TO SAY?

If you are an audio professional and have something constructive to say about your field of expertise, or tips for your peers, contact us with your ideas at ftr@audiomedia.com

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Videosonics Closed To Business

Some might say it marks the end of an era – others might say it's a sign of the times. Both are probably true. What is certain though is that after 24 years in the business of audio post production, the loss of Videosonics is a significant, sad, and iconic event. PAUL MAC talks to Dennis Weinreich about the circumstances surrounding the liquidation of this important facility.

Videosonics grew from observations of the inadequacies of traditional audio-for-video production at a time when the music industry was forging ahead with new techniques and technologies. Capitalising on his experience in music, and a bit of fortuitous timing (the government-backed independent production quotas), Co-Founder Dennis Weinreich (together with his wife, Li) quickly built Videosonics into the go-to place for a booming production industry. Videosonics pioneered the use of non-linear technology with the AudioFile system, and eventually moved into an ample space in Delancey Street (Camden Town, London). Videosonics has spent 24 years growing to the size of four surround sound mixing rooms (including three THX film dubbing theatres), nine all-digital editing rooms, a dedicated Foley studio, and nine editorial/production rooms. The product that has emerged from the facility is a canon of the best in British TV and film, the studio has a long list of happy and loyal clients, and it boasts one of the most impressive staff retention rates in the business. So why has the business failed?

> "It could continue – I'm not saying it won't – but as we sit here right now, the main concern is an orderly and honourable ending of Videosonics. That's what's important."

I went to the facility half expecting Dennis to open the doors himself and guide me through an empty studio to a lonely office. This turned out to be far from the reality. At a cursory glance, you wouldn't have known anything was up – reception still busy, runners still running, business still being done. In fact, a new company – APA Audio Post – is in-situ, though this is a product of the liquidation process. APA exists as a vehicle to see ongoing projects through to completion. "When every project is finished, so are we," explains Weinreich. "It could continue – I'm not saying it won't – but as we sit here right now, the main concern is an orderly and honourable ending of Videosonics. That's what's important."

Weinreich's concern over the Videosonics legacy and and its 'honarable' departure is the mark of a man who has been praised many times over the years, not only for the success and the results, but his willingness to put back into the industry a little of what he has gained, through industry associations, events like the Conch awards, and a commitment to the nurture and training of staff.

"With the best will in the world, people will not realise everything they would have hoped to in their relationship with Videosonics," Weinreich continues. "But I would like to think we will do it well – that my creditors, which are thankfully fairly small, will all suffer the minimum – that my staff will suffer the minimum."

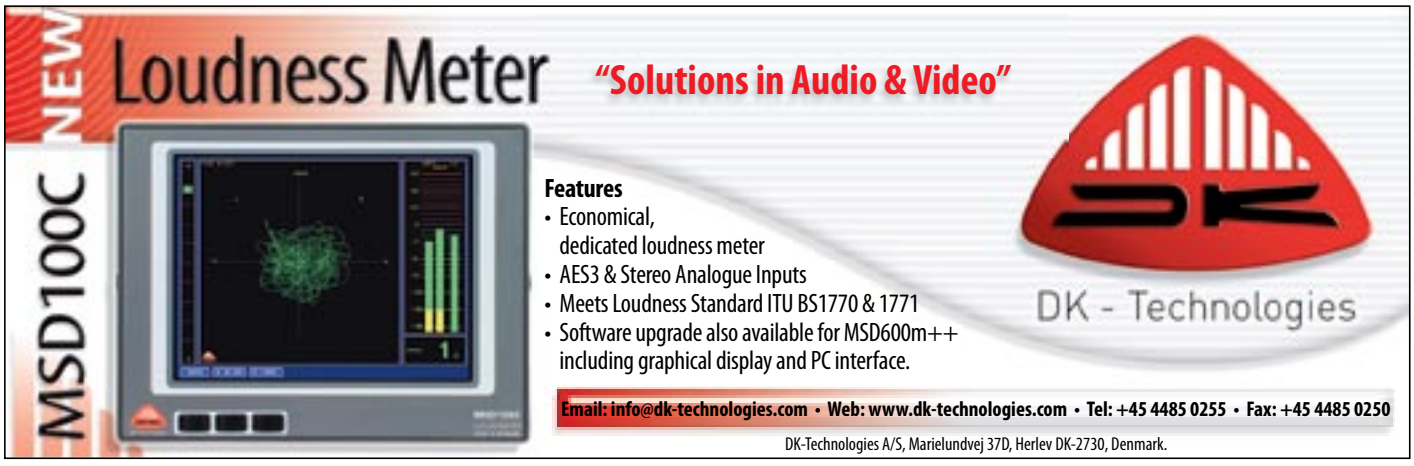
Dennis Weinreich of Videosonics.

The Golden Ratio

On the reasons behind the financial failure of the business, Weinreich was happy to name the main players. His finger first points at the business itself: "I think that if there was a strategic error that I made anywhere, it was that I should have maintained a 50/50 mix of film and TV work," explains Weinreich. "Somewhere back in 2003 or 2004, the film industry was exploding, it was so busy, and people were begging us to work in film... we were seduced by that to some degree. You start to look at a TV job, and think 'well, I like that show, and it's a good show and everything, but I can do this movie and it's more satisfying'... Sound is the junior partner in a TV relationship... In a motion picture, that's not the case – the importance and the emphasis on sound as a tool for helping you tell the story has much more respect than it does in TV."

Making Cuts In Creativity

So Videosonics' work was more and more dominated by film. Fast forward to 2006 and the incoming bombshell of changes to the tax rules that, up until then, had fuelled the boom in the British film ▸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industry. "Section 42 and 48 of the tax rules, were coming to an end," says Weinreich. "The government felt that the old tax rules were being applied in a fashion which was being used for tax avoidance, and that was unacceptable to them, but they still wanted to give support to the film industry... The new rules were announced on Dec 5, 2006, in the autumn statement by the Chancellor, but they hadn't been approved by the EC. They had to be watered down, and the net result, cutting to the chase, is that a picture that in 2005 that would have had a budget of maybe $10 million, has now got a budget of maybe $4 million."

Weinreich notes the story of a British Director who, at around that time, had a $25 million film in waiting. That was soon curtailed to $8 million – and you can bet that the sound budget took a big hit. However, Videosonics still went ahead and did the movie, but where do you save? Weinreich: "How do you tell a guy who's sitting in his room with his Pro Tools and his sound effects, 'do less, be less creative, don't do as good a job'. You can't do that, it doesn't work. We were never able to fundamentally reduce our costs down to the budgets that our clients had. Eventually that was going to catch up to us. And it did."

The Agility Of An Oil Tanker

Interestingly, Weinreich believes that in the earlier days of the facility's evolution, Videosonics had the agility that would have been required to cope with such a change in circumstances. Unfortunately, he also recognises that the agility had waned even before the film boom-time. "There came a moment, probably in 2000," Weinreich relates. "In which I remember saying very, very clearly to Li, and a few of the other senior people around, that it felt like we'd lost that agility. Now everything we'd do was going to be like turning an oil tanker. You felt that people were becoming a little bit compartmentalised – 'this is what I do, I do that well'. It was a little harder to say to someone, 'I know your senior-self is this really, really creative sound effects creator and all that stuff, but I really want you to go and do this documentary'. There were more BAFTA nominations, there were more Emmys, there were more awards – there were more senses of self. I think I knew at that moment that we were in trouble.

"...None of the changes that were needed were a surprise. But somehow or other, the ability to create the change that was needed was too difficult. You come into work in the morning, and maybe you're on the bus and you're thinking, 'Oh, I've got to do this, this, and this...', and then you come in and there's a problem. So all of the stuff you've planned gets put aside... and you're not taking care of this other thing that's lurking in the background."

Some might say that location had its hand in the eventual failure of Videosonics – that 'not in Soho' thing that accompanies raised eyebrows at every discussion about a studio outside the hallowed streets. However, Dennis Weinreich does not see it as a particularly significant contributor. While he acknowledges that Camden Town has lost its thriving media community to a large extent, he also says that Soho has both enemies and devotees in the client pool.

The Road To Closed Doors

The failure of a business is hardly ever a simple thing, and these things only touch the surface of a complex road to the day that Videosonics had to close its doors. Weinreich maintains that a piecemeal reduction of costs, with staff losses and short cuts that might have kept the ship afloat a while longer was unacceptable to him – better to bow out gracefully than hang on until an inevitably bitter end.

There are still issues to resolve – the fate of the building is the most obvious, with Weinreich very aware that while a big building is a potential sweetener, a big building split into bespoke audio studios is a more difficult matter. Weinreich's future is certainly not going to be desperate, as even he acknowledges: "What's clear is that I've got lots of options. I didn't realise how many options I really had until the last couple of weeks... I will stay in the industry."

I'd like to thank Dennis Weinreich for his candor in discussing the Videosonics liquidation and the circumstances surrounding it, so soon after the event.

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DSD	48	48	48

Dane To Be Different

DPA Founder, Morten Støve, talks to *Audio Media* about the Danish manufacturer's plans to bring its message of quality to the stage and to the (HD) screen.

Since DPA's beginnings it has built its reputation on sheer quality – a range of microphones that has broken new ground in quality, application, and innovation. Now, with expanded production capability and a precision tool shop since merging with Muphone three years ago, the company is setting its sights on the future. Morten Støve is one of the architects of the company's success, and he agreed to talk to *Audio Media* about what that future holds.

***AM:* We know that DPA has got big plans for the coming years – what's the strategy? How has it come about?**

Morten Støve: We made a market model and bought reports from market researchers to find out where things are going, how big the world market is for microphones, and how is it split in broadcast, theatre, PA, private, other... We could see, which was no surprise of course, that the studio business is not really where the big growth is these days. But the PA market is growing, and the musical instrument market for good quality microphones is growing.

We want to give musicians an extension of their instrument – a good microphone. If people have a good instrument, they definitely have to look at the microphone as its extension.

So, we have to make something that would be stable onstage. Something that can handle good sound pressure levels in front of a monitor – mics that would fit on stage – and something that would make it easy for people to handle... something that is rugged, something that you can mount onto the instrument with one hand.

We've stepped up to the plate and said, 'we're going to do this big-time, we're going to put money into it, and make something that's really, really nice.'

> "We want to give musicians an extension of their instrument – a good microphone."

***AM:* Will it be a single mic, like the 4080, plus varied accessories depending on the instrument?**

MS: If we're lucky, yes, but it might not be the case. Actually, what we do is take a mic, and find out what needs to be done to make it perfect for an application. We might have one that has a bass roll-off, where another one doesn't; or one that has a wider frequency range than others. It has to fit the instrument. The fewer the better – there's nothing better than keeping components down, or keeping the numbers up – but we want to make it dedicated to the instrument. We're starting out with sax, trumpet, guitar, violin – string instruments. And then we'll move on from there to drums.

***AM:* So the strategy with that range is to give musicians the opportunity to take responsibility for the sound of their own instrument – one they've spent so much money on in the first place?**

MS: Spent so much money on... and made such a big effort in practising. When you use a DPA you pick up a lot of detail, so you also want to make sure that you're willing to hear those details.

It reminds me of a demo I did many years

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ago at a festival where I met two violin players, and I had brought our new mic holder for violin. I put it on, and the first one played, and he said, 'Oh no, it picks up too much noise when I play'. Half an hour later, I met the other guy and put it on. He tried it and said, 'I have to go home and improve my technique'. Exactly the same thing, just two different opinions.

If you're using a really good mic, then you can really use it in the way you rehearse, and the way you practise – you can hear details that are good or bad; you can enjoy them; you can get inspired.

***AM:* It'd be nice to think that musicians could arrive to an orchestral session with their own mics.**
MS: Yes. It will give them a sense of security as well. If you've been at live shows where they put up a cheap condenser for the violin section... those people have been practising and practising, and they're playing a really expensive instruments... it's not fair.

We will start going out into rental houses, because they're the ones out and about constantly, and they need something that's fast to set up and works really well. Once they're out, then the musicians will see them, and say 'wow, that's cool'.

And another thing is that once you step up to the plate, and say, 'we're going to do this seriously and we'll mass produce this', you can get a good price out of it. Of course everything is relative, but it's going to be sold at around 400-450 Euros for each mic.

***AM:* So not a big price to pay compared to the prices of the instruments?**
MS: Exactly.

***AM:* When will we see instrument-specific product?**
MS: The PLASA show in September in London will be the big launch. We'll have musicians there playing with these new mics, and we should have 1,000 in stock by that time. That's the goal.

We will start out with four versions, and then we'll expand that up to eight or nine different ones, but dedicated to the instruments.

***AM:* We understand that another key market for DPA will be surround?**
MS: HDTV is going to be in a lot of big countries next year, and in some countries in 2011. The US is next year... Japan is soon as well. There are so many ways of doing it, but if you want to do the big set ups, it becomes complicated. People like something that's quick and easy – we're talking about sports applications here. Of course, you can go in and use it for recording, but that's not the main target. It's sports applications, where you go out and want to have the feeling of being in the stadium, and that is going to be big.

***AM:* And can you give us any clue on what form the actual product is going to take?**
MS: Physically it'll be made with five microphones, and it'll probably be a 5.1 solution, so we will have six discrete outputs. Physically, it will be about 30cm x 30cm, and be able to withstand being outside, so you don't need anything to cover it.

The 'engine' of the capsules will be the same as other DPA mics, but we are tuning them a little… we're using interference tubes on some, so it'll be something that's not been seen out there before.

INFORMATION

Ⓐ DPA Microphones A/S, Gydevang 42-44, DK-3450 Alleroed, Denmark
Ⓣ +45 4814 2828
Ⓦ www.dpamicrophones.com

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NOVATION REMOTE 25SL COMPACT

AUTOMATIC PLUG-IN MAPPING

SIMON TILLBROOK finds that even with the smallest of footprints, Novation's Midi controller doesn't lack direction in automatic mapping.

Although it is possible to control all aspects of our DAW systems simply via the keyboard and mouse, for most of us some degree of external hardware control over this virtual world is still very desirable. It comes in all manner of conventional and very unconventional configurations, usually targeted at a specific area of the system such as mixer or performance control.

The massive increase in software instruments, with increasing levels of sophisticated control available on them, has had an impact on the types of controller we now demand. We like to have a good intuitive device to input performance in particular, and with the power to take our systems anywhere we like, portability has become increasingly important.

Novation has been at the forefront of performance oriented controllers, and for some time it has produced controllers for all applications. The unit I have for review is the latest in their portable range, the Novation Remote SL Compact.

The Novation SL Compact is a 25-key Midi controller, the smallest in the range, and the smallest to feature Novation's Automap Universal system.

Automap Universal

For those who have not come across Automap before, it is worth explanation before looking at the SL Compact in more detail.

Automap Universal is a system that allows for automatic mapping/assignment of a variety of software application parameters to the controller's hardware. This applies to software applications such as soft synthesiSers, AU or VST plug-ins, and DAW mixer interfaces. As well as templates for numerous examples of these software applications, Automap Universal also has the facility to quickly learn so you can add or customise the mapped parameters, as you like.

For this to work you need to install the Automap Universal Server software that is supplied with the controller. This then runs in the background so, as you select your application, parameters are mapped to your controller device.

Automap Universal is constantly being developed, and new applications are becoming supported all the time, so you need to keep an eye on Novation's website to download the latest supported application wrappers.

Controller Surface

On first inspection, the Novation SL Compact layout appears reasonably logical, not something I can say of all controllers I have seen.

The 25 keys of the main keyboard area are semi-weighted velocity-sensitive with aftertouch. Alongside your main keyboard you have both a sprung pitch bend, and a modulation wheel. Above this in the top right corner of the SL Compact are the eight assignable drum pads, nicely located for ease of access.

Centrally located above the keyboard is a large LCD display. This is a good sized display, as opposed to the usual wristwatch sized displays we often have to put up with. Above the display are eight rotary encoders and eight buttons whose current assignment is displayed below them. Both the rotary encoders and the buttons can be switched between four groups or banks using buttons below the display. This then gives us control of up to 32 parameters.

Five buttons to the right of the display help you to navigate through various pages of parameters and switch the display between the keyboard and drumpad assignments as needed.

The five buttons to the left of the display let you select either standard play mode, or one of the three edit modes, as well as selecting your desired application template and saving learnt data to memory.

A set of transport buttons for use with your DAW system are located on the far left of the SL Compact, along with menu and octave transpose +/- buttons. The final top panel control is a rotary encoder called Speed Dial. When in an application, you place your mouse over

THE REVIEWER

SIMON TILLBROOK is the Principal Music Tutor at Islington Music Workshop in London. The rest of his time is spent as a freelance engineer, mainly in the USA.

a specific function/parameter and then modify or change value using the Speed Dial.

The rear of the Novation SL Compact has a socket for an external power supply and a USB socket. The SL Compact can be powered by the USB as well as this external supply, and there is a switch to select the power source.

Sustain and expression pedal jacks with a single pair of Midi input and output sockets complete the SL Compacts facilities.

Use

The Novation SL Compact comes with a USB cable and a couple of discs. The resource DVD contains the Automap Server and SL Compact installers for both Mac and PC, along with PDF user guides and tutorial movies. The second disc contains bundled software with some samples to get you going.

I used a Macbook Pro with Pro Tools for the duration of the test, and on this setup the installation of the software was as simple as you would expect.

There are 40 templates on the SL Compact and, scrolling through numbers 1-33, you can see templates for all the usual DAW and instrument suspects: Nuendo, Protools, Logic, Alberton, etc. Templates 35 and 36 are user storage locations. Automap uses 37-40 and 34. You really do need to keep looking at the Novation website as refinements to the software used by the SL Compact come quite quickly.

As soon as I fired up my main application I could see the Automap server automatically launch. The server let me add applications that I wanted to use with Automap: one box on the left with the list of applications, and simply click to add the chosen ones to a box on the right.

So how does this Automap Universal work? The answer is pretty good overall. I launched a number of plug-in processors and instruments with the SL Compact responding and mapping out the controls immediately. Clicking between a few opened applications, the SL Compact followed my choices, displaying and controlling the selected application.

The one control I became very fond of was the Speed Dial. I found this feature really useful for quickly changing values. It really does apply to whatever your mouse is hovering over. I tried it everywhere and could not find anything that was not recognised, very useful indeed.

As a controller for DAW mixing, the SL Compact will split opinion. This really is all about how you prefer to work and, for some, rotary as opposed to linear level controls will feel a little odd. Using the Protools HUI all worked with no problems, it is simply about your workflow.

I employed the help of a more capable keyboard playing colleague to get some feedback on the feel of the SL Compact keyboard. Novation has always supplied good quality keyboards and the SL Compact is no exception here.

The Drumpads worked fine, but did not feel that great. There is virtually no give in the pad, and the rubber covering the top of the sensor is very thin indeed. You have to keep in mind that the SL Compact is built to a price point, but as a performance input device this is a consideration.

Conclusion

The Novation SL Compact packs in a great deal of control in a very small footprint. Layout of the controls is clear and straightforward, and the feel of the performance controllers works well, particularly in the case of the main keys.

Automap Universal is a great time saver, and the Speed Dial is a simple and indispensible addition.

The SL Compact is a great little controller that will satisfy those looking for a great range of control and feel in a cost-effective portable unit.

INFORMATION

£ GB£219.95 (inc.VAT)

Ⓐ Focusrite Audio Engineering Ltd./Novation Digital Music Systems Ltd., Lincoln Road, Cressex Business Park, High Wycombe, HP12 3FX
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ALISTAIR McGHEE finds a new way to use this flexible, programmable DSP box, and tries to convince everyone to buy one instead of a pastie.

BBC Wales has just launched a newly fitted out multi-media bus, so newly fitted in fact that it's not actually finished yet, but the Urdd (one of Europe's largest youth culture festivals) called, and the blue bus was rushed to the radio front line. At the heart of the new audio installation is Allen and Heath's iDR-8 DSP-based mixer, that provides cue mixing and talkback. It was kind of an unusual choice, as we would normally turn to Prospect or Glensound for our comms solutions for a vehicle mostly doing radio. However, I stupidly asked our senior OB engineers what they wanted in a talkback system, and of course it was a large sink usually found in kitchens. And the iDR-8 brings a lot to the party. Designed as an installation mixer for clubs, churches, and conference centres it offers a high degree of flexibility, some really tidy control options, and a price that doesn't break the bank. We ordered the optional input and output expanders which bring the system up to 16 in by 16 out, and three PL-10 eight rotary control panels.

how the system is going to cohere. My favourite mistake was getting open talkback to all outputs on the night before we went live – careful with those pager settings is all I can say.

On the first morning we went live I rang Gwynfor Jones, the Senior Engineer, at about 7am to check it still worked, but my fears were unfounded and having got the programming right, the system has delivered so far in spades. In some ways it suits broadcast better than the install market it was designed for. I love the fact that it has XLRs and MIDI, so I can drag it out of the rack if I have to and plug in industry standard controllers. I can't wait to get a Kenton plugged into to it, to get 16 faders. I love the overkill in control interfaces and the fact I can plug three 24 key switch boxes in. And there's loads of things I haven't tried yet like ambient noise compensators and automatic mic mixers. Oh yes, and infrared control from remotes and wall plates. I haven't been as excited about

ALLEN & HEATH IDR-8

AUDIO MIX PROCESSOR

For the Eisteddfod, we have nine inputs to the cue mixer including two discrete talkback positions, eight outputs, each with an individual cue mix, and eight talkbacks including group outputs.

Out of the box the iDR-8 provides a 10 in, 10 out matrix with eight mic/line inputs, eight balanced outputs on XLR, and two balanced inputs and outputs on jacks. The mic inputs have a pad/phantom power and 50 dB of gain. Each input has a full range of EQ, compression, delay, gating, and a host of grouping, ducking, and diving options. Well not really diving. The inputs can be fed into a gain or mute matrix to feed each of the outputs so you can maintain up to 10 independant mixes. With the added expanders, it becomes a full 16x16 system with all i/o on XLRs, and 16 mic inputs.

Programming the box is via a Windows interface and the control options are tidy. Allen and Heath have their own PL-Anet which is daisy chained over Cat 5 with the controllers drawing power from the iDR-8, or you can have Midi, Sysnet, RS232, or a custom serial interface. You perm any two from start up and you can already see the range of options available. We opted for PL-Anet and the PL-10 box that has 16 keys, 24 LEDs, and eight soft rotaries with LED display of rotary settings. For the Urdd, I configured one PL-10 with seven switches as talkback to seven outputs, seven switches selecting the rotaries as individual mix controllers (that is the matrix gains of each output), one switch for input gains and one switch for output gains.

On the second PL-10 we had five individual talkbacks, one master talkback, and one group talkback, with two four-input mixes on the rotaries to separate cue speakers. Like any kit capable of flexible operation, programming is a matter of practice, and in the course of the set up I made every possible mistake (or at least it felt like that) and I think some new mistakes that hadn't been thought of before. The online documentation is a bit thin so you have to be really on your toes when thinking through a product in ages; it's very, very clever.

Like all geniuses it has flaws. Better talkback control, boolean logic in the programming, preset manipulation from the key pads, and a really tidy mix controller would all be welcome. Better documentation would help keep novices like me from bumbling into open talkback, and sometimes I find myself wondering if I hadn't saved a setting or whether the iDR-8 had forgotten it. But don't let any of this put you off, the flexibility and power of this system is glorious. Did I tell you the input and output expanders can be up to 250 metres from the iDR-8 and require just a couple of cat 5s to function? Or that on the front panel you get another 16 soft switches and 32 LEDs, or that the LEDs can be multi-colour gain meters, so you can monitor all your input and output gains – plus use the switches to solo them to the onboard headphone amp? But please A&H, give the amp a bit more oomph. What I want for Christmas now is a PL controller with eight old-fashioned keys for talkback, a built in speaker, and the software to recognise multiple key presses so you could emulate the talkback of my youth. But even better would be if you all went out and bought one, so the price would come down, and I could have another one. And it's made in Cornwall, surely this is a cause for celebration and demands more attention than a pastie?

INFORMATION

£ **iDR-4 4+2 In/4+2 Out Digital Mix Processor GB£1,188.75 (exc.VAT), iDR-8 8+2 In/8+2 Out Digital Mix Processor GB£2,354.04 (exc.VAT)**

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THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.

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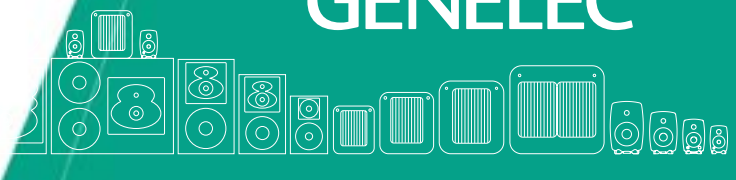

KARL FOSTER examines EastWest/Quantum Leap's 64-bit, network-capable Play sample engine and assesses the quality of its two new sample libraries: Goliath and SD2 – The Next Generation.

EASTWEST/QUANTUM LEAP GOLIATH & SD2

VIRTUAL INSTRUMENTS

There are numerous ROMpler engines on the market, each front-ending large sample libraries and offering a degree of sound-sculpting. Soft samplers they are not, in that you can't drop in your own audio clips and perform extensive modification. Rather, the ROMpler relies on banks of audio files, often of a specific genre, and shaping tools by which to customise them.

Quantum Leap, a division of Hollywood-based EastWest, has until recently relied on Native Instruments' technology to present a diverse range of virtual instruments to the user. Of late, however, QL has rolled out a new range of ROMplers driven by the Play Advanced Sample Engine, which is included free with its latest virtual instruments. The first products to sport this new interface technology are Fab Four, Gypsy, Pianos, Voices of Passion, Ministry of Rock, and the two examined below: Goliath and SD2.

Overview

Play, while 32-bit compatible, offers 64-bit support, meaning it'll happily make use of all the RAM on your system. There's also Network Control, which enables you to load instruments onto other machines on the network and control them from the host workstation. The Play browser lists all of the instruments installed, so it's a case of choosing a volume, previewing a patch, then loading it. The interface automatically changes to match the package hosting the patch.

The software runs standalone on Windows XP, Vista 32 and 64-bit, and Mac OS X. Also supported is VST, ASIO, DirectSound, Audio Unit, and Core Audio, while certain libraries are being made available as RTAS – the SoundsOnline website can advise on availability. Incidentally, Mac users should note that, while the instruments are compatible with both PPC and Intel, QL suggests they perform better on the latter.

That's the underlying technology of Play. At the business end, each supported QL instrument sports its own interface design, complete with a moderate set of sound-tweaking tools, backed up by sound libraries ranging from the huge to the truly titanic. SD2 – The Next Generation is the successor to StormDrum, a collection of percussion hits and loops ideal for filmscore work. Its 13GB library is supplied on two dual-layer DVDs, so you'll need an optical drive capable of reading such media. Even bigger is, as the name implies, Goliath, a pumped-up incarnation of its predecessor Colossus. Six single-layer DVDs host a 40GB install, which takes an age to load, but places more than 180 instruments and 600 patches on your more-than-necessary dedicated media drive. Piracy protection is via iLok hardware dongle (not supplied), so that's another USB port gone, but it can accommodate more than 100 cross-platform licenses.

In Use

Folk often talk about the 'learning curve' involved when mastering a new piece of music-making gear. 'Flatline' seems more appropriate to both SD2 and Goliath. Delving through and organising the huge number of patches is easy thanks to an elegant browser with both a Recent sub-menu and a Favourites section into which you can create folders of oft-used sounds. During testing, we loaded the core libraries onto a four-volume RAID 0, hooked up to a Mac via SATA, and so sound files fair-well flew up the wire. It's possible to load multiple patches into one instance of either product, each assignable to up to nine stereo outs, although QL reckons you'll get better performance by loading multiple instances when running the software as a plug-in.

Goliath's interface is uncluttered, with handy Delay and ADT modules on hand, as well as a preset-driven Reverb and a Filter section equipped with Resonance and Frequency rotaries. Envelope is more generously endowed, featuring AHDSR rotaries, and all the above are modifiable via MIDI. If a master patch has multiple articulations, activated by key switches outside of the instrument's range, they show up at bottom right in the Articulations window and can be selectively deactivated, or unloaded. It's an excellent way to present the possible articulations, saves an age looking them up in the manual, and the switches are clearly tinted blue on the keyboard.

SD2's interface is even more Spartan, dispensing with the Articulations window and much of the MIDI information you'd see when using melodic patches. In essence, then, it's merely a case of picking your sounds, loading them up, assigning MIDI inputs and audio outputs, making FX tweaks, and bashing the keyboard. The most important thing, however, is the quality of sound.

Quantum Leap does not disappoint. Both products' multi-sampled, velocity-switching samples are rendered in excellent detail and with not an artifact in earshot. From raunchy guitars, through sonorous flutes to the lush tone of the PMI Bosendorfer 290, Goliath offers an awesome sound palette. SD2's wide-ranging percussive timbres, meanwhile, have an excellent stage-ambience appeal, even when untreated. And there's more than 100 score-orientated MIDI performance files on hand to make programming sequences a cinch.

Conclusion

For an easily manageable and comprehensive library of staple sounds, plus numerous esoteric excursions, Goliath is hard to beat. The samples are of top quality, and the sheer variety of timbres make it a great addition to the music-producer's arsenal. And for those seeking added percussive power, SD2 brings rock, world, and even electro-glitch to the party. It seems clear that QL has decided that content is king, concentrating on quality sound and abjuring such bells and whistles as built-in EQ, compressors, and the like – all stuff that can be hived off to other devices. With the Play engine at the heart of the product line, flexibility and ease of use are also clearly high on the agenda. Make sure to take in the audio demos at SoundsOnline's website for an earful of what this combo can do.

INFORMATION

£ Goliath RRP: €495 (ex VAT), SD2 RRP: €329 (ex VAT)

Ⓐ SoundsOnline
Ⓣ +1-323-957-6969 (USA)
Ⓦ www.soundsonline.com

THE REVIEWER

KARL FOSTER has been involved in high-tech music production since the days of the Atari ST, and has edited a number of music technology magazines along the way. Based in Staffordshire, he currently specialises in technology journalism and can be found online at www.karlfoster.com.

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Jeff Martin chooses the X-48

photo by EJ Carr

Jeff Martin is a singer/songwriter who was raised in Ontario Canada and as a member of the chart topping band The Tea Party produced several critically acclaimed albums. Jeff developed a fascination early on with eastern tunings and instruments, a preoccupation he later indulged with great success with the Tea Party and recently his solo projects.

Jeff is currently working on his new album at his project studio in Eire where the TASCAM X-48 digital workstation is centre stage. TASCAM are proud to have this hugly talented Guitarist / producer endorse our products and for those who have not heard of Jeff you are in for a treat. Be sure to check out his web site for sound bites and tour dates.

Check out Jeff's incredible web site @ Jeff-Martin.net

Call Gary on 01923-48880/438845 for more information or to arrange a 121 demo.Alternatively visit www.tascam.co.uk read to all about the X-48.

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INDIANA JONES

AND THE KINGDOM OF THE CRYSTAL SKULL

STROTHER BULLINS talks to Sound Designer/ Co-supervising Sound Editor Ben Burtt about his role in the latest adventures of Dr. Henry Walton 'Indiana' Jones, Jr.

This month, the term 'summer blockbuster' is defined worldwide by the feature film trifecta of George Lucas, Steven Spielberg, and Harrison Ford. Yes, Indiana Jones is back, and it's a good bet that his film will be the most notable action/adventure of the 2008 movie season.

In the 2008 installment of this lucrative, Ford-led series – *Indiana Jones and the Kingdom of the Crystal Skull* – Dr. Henry Walton 'Indiana' Jones, Jr. stumbles into another adventure when, in 1957, he crosses paths with a convoy of Soviet soldiers infiltrating Area 51 in the state of Nevada. From there, it's off to Peruvian jungles, rivers, waterfalls, and ancient temples – settings and scenes that are all perfect accompaniments to the largest of movie theatre popcorn tubs… with butter, please.

Rejoining the 'Indy' team, Sound Designer and Co-supervising Sound Editor Ben Burtt found his work fun and rewarding, yet no small task. "It's very tough making sequels to films people love," he begins. "Expectations run so high. I've really enjoyed working on this film, as I love *Indiana Jones* as a genre. This film doesn't reflect the advent of video games in any way; it's not a hyperkinetic world of cameras that can go anywhere. It's a traditional film with a belief that everything you see was filmed with a camera that *was* really somewhere… likely on a tripod."

A Traditional Fashion

According to Burtt, *Indiana Jones and the Kingdom of the Crystal Skull* largely ignores the fast cutting trend of most modern action films. Instead, the film is essentially a period piece, and through Spielberg's careful direction and desires, it has been timeless since its inception.

"As we know, the modern action film has become quite fast in terms of cutting pace – many angles, lots of cuts," offers Burtt. "With that, every time there's a cut in picture, there's probably a change in sound; a new sound is added, an old sound is modified, or something. When shots are shorter, the real challenge is making things read in a pleasing way other than coming straight at you. The nice thing about *Crystal Skull* is that Steven Spielberg shot, edited, and directed the film in a very traditional fashion. Most action takes place in the frame without a lot of cutting; stunts are done physically – people fall and jump in one shot, not in five angles. It gives the sound person a chance to design sounds that have a beginning, middle, and end, rather than being assaulting on the senses."

Thus, Burtt insists that *Crystal Skull* even seems to be "a lost film. It's like, 'wow, that must've been made 30 years ago!' It's a very faithful recreation of the visual and movement feel of *Raiders of the Lost Ark*. It doesn't mean that the sound is any easier; it does mean that the sounds can be, in a sense, showcased because they've been given a place to live."

Getting Started

Last year, Burtt was allowed to read a script for *Crystal Skull*, which gave him a jumpstart on gathering and recording sound design materials. "That way I could start to make my 'shopping list,'" he explains. "I could write down all the places they go, the weapons, the vehicles, environments, and, of course, the crystal skulls themselves. From the start, I could assume that there had to be some special sound associated with the artifacts, as they have a mystical role in the story. Once I analysed the script, I did two things: record new, fresh sounds, and go to the library of things I've already made for *Indiana Jones*, revisiting places I thought there could be similar material that we covered in the past, as there could be ideas there that I could develop new sounds from."

Burtt notes that there were approximately 700 new sounds created for the project, a significant amount for an Indiana Jones film, he insists. "Usually there's 500 effects, 600 tops, made for each movie. Of course, those effects are sounds attached to everything from strange doors to environments, to vehicles, to the sound the skulls make and where they are. Obviously where there's an action or chase scene, you want to have what I'd call the most exaggerated, 'comic book' style sound attached to things… face punches are like cannons, right? *Everything* is magnified. The sounds in an *Indiana Jones* film are always magnified and that's the way it's been since the beginning."

Spotting With Spielberg

After catching a clue via script, Burtt sat down with Steven Spielberg for a spotting session. "We run the film on the editing machine," explains Burtt of the process. "He'll stop and give his comments about what he wants to hear, what things are important, and what his vision is for any particular sequence. For *Crystal Skull,* quite often he would say, 'We've done something like this before, so you know what to do,' or 'I love the old stuff!' – that kind of thing."

For Burtt's sound design work, 'the old stuff' came in quite handy for placing amongst newly recorded elements. "We had about 2,500 sound files that were part of the original film series, and where necessary, we'd go back and use some of that material. Plus, as I started to realise as I was going back through my old tapes, lots of times I would make many different versions of something. There would be unused outtakes in the same style of sounds, and some of them were applicable to the new movie, so I was fortunate there."

Having also worked on another notable blockbuster action series, *Star Wars*, Burtt was used to carefully utilising a particular aural vocabulary. "When *Star Wars* was revisited, I faced a little bit of the same issue: it too has a unique library, a certain style, and obviously a set of ►

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sounds in which I wanted to maintain continuity, not only by using some of the original material, but in making new sounds that I would connect in some things. I suppose it is a little bit like a composer, like [*Crystal Skull* Composer] John Williams, for instance. He revives his themes for *Star Wars* and *Indiana Jones*. He adds 'new' where necessary, but you have that already well-established theme for the character, and it's how audiences already identify with the character, so why not? In a similar way, this stays true with sounds and sound effects. Audiences may not be quite as aware of it [for sound design] as they are with music, but nonetheless, they identify with the types of sounds that were created for the original films."

Time-Tested Standards

Burtt will be the first to tell you that he's not an audio gear hound. Matter of fact, he's been using the same two microphones for decades. [And just think: how many sounds have we heard that were captured with these two specific diaphragms!] Clearly, what works for Burtt truly works.

"I've settled on one standard kit," he humbly offers. "I've been using the same Sanken M-S stereo microphone (CMS-10MS) for years, probably just because it's always just worked for me. Most everything I need is attainable with that mic; I also go to an old Sennheiser MKH 816 shotgun mic. I record onto a Sound Devices [digital location recorder] using pretty much the same microphone all the time. Being in the field, it's a matter of using the equipment and getting the mic in the right place to get what I want."

Burtt continues on the subject of audio technology. "I'm not much of an engineer or an audiophile," he says plainly. "I try to make a connection between what the listener is going to see and hear in the movie, and try to pick the right sounds for the right moment that go with the picture. It's just based on my own intuition rather than any technology. So I didn't really apply any fancy technology to do the sound recording in this film."

Sorting Through Tape

In culling appropriate audio for *Crystal Skull* from the Indy archives, Burtt re-entered the world of analogue tape.

"We went back to gather all the sounds that we ever created for the Indy films, most of which only existed on quarter-inch tape," he offers. "Luckily, those were stored for all these years and had notes and descriptions with them. One of my first tasks was digitising that entire library to bring the sounds into Pro Tools and have the searchable database so we could find anything we want."

For the fight sequences in *Crystal Skull*, Burtt found plenty to work with from the old tapes. "And of course, we have *a lot* of fights in the film," quips Burtt. "Fistfights, crashes, fires, and falls."

Then, the new locations – the Area 51 warehouse, the Peruvian temple where the crystal skulls reside, and all sorts of dangerous places in between – Burtt was able to stretch as far and as wide as he wanted in creating new sounds… but still, to a certain limit. "Sound design for *Indy* is a different trick as compared to *Star Wars*," explains Burtt. "The world of sounds in science fiction gives you a lot of freedom to create new things that people have never heard before because there's nothing to compare it with. *Indy* exists in the real world, on Earth, in period locations. The trick for *Indy* is to create the sounds with the right emotional colouration; they seem real, credible, and are made up of real things – not synthesised sounds, or sounds that are too abstract. In *Indy*, you're not working in outer space, but with trucks, other vehicles, jungle birds, avalanches, and landslides."

Lying Alongside The Music

As can be gathered by the title, *The Kingdom of the Crystal Skull* places great importance on the skulls themselves. In the instances where the skulls appear together near the end of the film, tension, intrigue, and energy have music, effects, and dialogue, shoulder to shoulder.

Making the skulls aurally meaningful is a careful process, offers Burtt, as it's a synergy between effects and music. "Once you're working with the skulls, you edge yourself up against music because you're trying to attach a sound to an abstract concept. This is where John Williams and I overlap a lot. You have to negotiate who's going to do what, or how we're going to work together. That's always a big issue, as the films have a lot of important, wonderful music. But the soundtrack can only have so many sounds going on at once, otherwise the audience can't sort it out. As we get the music and during the mix, I make adjustments to everything that I created so that they work best with the music. Sometimes that requires dropping things, and in other cases, reinventing things so that they're at a different pitch, or something that works better with the music."

Place And Time

As in the past, Burtt once again found himself working on *Indiana Jones* sound design at Skywalker Sound in Marin County, California. "I did a lot of recording on the empty Skywalker Sound stage because I like to have a slight 'liveness' to the sound, even if it's the sound of pulling a sword from a scabbard," he offers. "Stylistically, a lot of the classic sounds associated with action films go back to the 30s and 40s, where they were recorded on an empty sound stage. That way, there's a sense of place to the sound."

The natural space and reverberation gleaned in recording effects in larger, natural-sounding spaces is a benefit when it comes time to put a bunch of unlike sounds together, says Burtt. "I think that many of the difficulties in trying to get sounds to orchestrate together come about when people record so many things digitally in the dry environment, then try to jam them all together when nothing really exists in a certain place. On the old Indiana Jones films, we didn't have a recording studio. I used to record a lot of the sound effects outside on a quiet afternoon at

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Skywalker Ranch in this little grove of apple trees. It had a nice exterior 'studio' feel to it and gave a little bit of soft reverberance from the trees, a certain sweetness."

From Skulls To Natives

Regarding time and pacing of his work on the film, Burtt offers that he did everything he could to work most efficiently. "You always use all the time you're given," he says with wisdom. "Especially in my work, you're required to be inventive on the spot and at every moment. You're also 'kind-of-never-done' until the film is to be delivered. So, I take a rather methodical approach to it; I write down all the sounds that I think I need to create, I see how many days or hours I have to work on it, and I'll divide it up. I give myself a quota: 'I need to do 20 sounds today,' for instance. Then I have to move on. Sometimes the 20 sounds I make today aren't the 20 I thought I was going to make. Quite often while you're experimenting, you find something else that you were looking for; I start out in the morning trying to make a sound for a crystal skull, and I realise that this sound is better for the charging natives, or something. So I just take advantage of all the time I have and chart it out."

Finally, if time is short, it never hurts being able to call on the talents of your best peers in the business. For *Crystal Skull*, this is exactly what Burtt was able to do. "Because I was splitting my time between two movies, I couldn't do absolutely everything," he says. "Some of the sounds were created by Christopher Scarabosio [Sound Re-recording Mixer and Additional Sound Designer], who mixed sound effects on the film. I've worked with him a lot over the years, and he has become a very successful sound designer and mixer – he was nominated last year for *There Will Be Blood*. We're friends. I'd say, 'Chris, I don't have time to do these trucks,' and he would work on those, for instance. Richard Hymns – who I share the job Supervising Sound Editor with – has a specialty in vehicles; he loves recording trucks, motorcycles, and Jeeps. We needed a lot of Russian military vehicles in this film. He went to huge efforts to find the right vehicles, get them out in the desert, and record them thoroughly. So, in the end, it was divided up: Richard did the vehicles, Chris did some of the vehicles and crashes, and I was responsible for the rest of it."

The '*Indy*' Legacy

Burtt intimately understands the Indiana Jones legacy, as he has worked on all of its versions: three previous feature films and the *Young Indiana Jones* television series. Thus, he insists that both desire and kinship led to his involvement in this, the long belated fourth installment of the Indy story.

"When it was discussed that they would come back and do a new adventure, I had a job at Pixar," Burtt explains. "I really wanted to be a part of it; it was very important to me that there was continuity in the sound design for the film. Back as far as the first film, *Raiders of the Lost Ark*, we tried very hard to establish a sound signature for the films in terms of the action/adventure sound vocabulary of the movie: the types of explosions, face punches, airplanes, and all of the topics that make up the usual kinds of adventures. We had established a style for *Indy*, one of the first big modern action films done with a customised soundtrack. We developed new sounds for old things; instead of pulling things out of a library that we could've used in the first film, we made everything anew, but it was based on what we loved about the old classic movies that *Indiana Jones* references."

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MERGING ADR PACKAGE

PYRAMIX ADR/FOLEY SYSTEM

ADR and Foley sessions can be the most mind-bending affairs, with so much to keep track of, so many to satisfy, and, usually, altogether too much paper, tracks, faders, and fingers. Merging believes it has the solution – a system than can run your recording sessions like clockwork. PAUL MAC discovers the truth.

THE REVIEWER

PAUL MAC is the Editor of *Audio Media* magazine.

Merging's Pyramix system is now well embedded in pretty much every area of the industry – broadcast, post, music, and so on. So now one question is, what can it offer those areas by way of 'specials' – the things that make specific jobs easier, more intuitive, or more productive? The new ADR package for Pyramix is one such special item, designed from the ground up to make the dialogue replacement or Foley session preparation and operation as easy as it can be, but as flexible as it needs to be.

I spent a while at the Merging booth during this year's European AES, with Merging's Alphie Larrieu, learning a bit more about the ADR package, and what it might offer an often overly complicated process. It was obvious from early on that the key word was 'automatic'.

Merging has spent quite some time (two years, apparently) researching the practice of ADR around the world and what sessions require in terms of switching, monitoring, video display, and even billing. The idea is that the engineer has everything required to run a session his way. That is, the ADR package should have to adapt to the requirements of the job, not the other way around.

To this end, there's a basic set of hardware that comes along with the additional software. The package is based around a partnership between Pyramix and VCube – the latter being Merging's own video playback system for audio post production, capable of working with more than 50 media file formats. With a single custom chassis for both parts of the equation, you can add GPIO cards for operating studio infrastructure during the session. A new custom keyboard for ADR operation, and/or the Isis or Ramses controllers.

By using the already proven technologies of Pyramix and VCube, Merging claims it's a package you can rely on, right from the start: "VCube by itself is a very complete video playback system, and Pyramix is a complete DAW that is already operational," says Larrieu. "So attaching a new module on top of these two machines actually ▸

NEW

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In essence, says Larrieu, "It's a loop based automated transport and monitor switching system. When I say monitor switching system, I'm talking about outputs to actual users, such as headphones for actors, headphones for engineers, and perhaps main speakers for studios, or cabin booths, or whatever other kind of monitoring output that you need to define – with automatic switching. "This automatic aspect helps keep the engineer's head away from the mundane – who wants to hear or see what, and when – and firmly focused on what's being recorded.

"With each talent definition comes defined physical inputs and outputs, all linked into the switching and monitoring system. You can even associate buss switches with the talent or with takes..."

Spit Spot

The ADR Package's usefulness starts right back at the spotting stage. You can import well-formatted spotting sheets straight into Pyramix, if you've got a system that you prefer – it'll import text or Excel-style spreadsheet data. You can do the spotting in the ADR Package itself, using automatic timecode notation along with the system's transport controls. The all-powerful loop list window is also the spotting sheet, with lots of standard columns – not only to help the session along, but to help administration as well. The sheet can be exported as a PDF and printed directly from the session as updates occur, and even sent directly to billing. And because it's linked to the session, it is updated along the way. For this, as well as many other aspects of the system, the custom keyboard comes into it's own – with more than a little help from the jog wheel: "We decided that for ADR, we don't want to have to make people learn Pyramix in a formal way," commented Larrieu, "...just kind get them into ADR features, and ADR functions, very quickly. The keyboard has all the features that you need to run ADR."

It's also in and around this loop list that some other important aspects are defined. The actors, for example, could have their real names as well as the characters in there, if that is more comfortable for them. Each talent is also assigned a colour. Thus, all the countdowns, wipes, and text (loop name, actor name, take number, and so on) are shown in that colour. There is even a coloured box on the loop list, and the colour is carried right through to the track colour in Pyramix. There's also the script text, the scene (associated video clip), in/out points, reel (or episode or part, etc), status (done or not), and more. You can sort the list by whatever criteria you choose, so you could list in order of actor, plus the lines that aren't yet done, and in timecode order, for example.

Inside Pyramix, each actor is designated a 'consolidated track'. All takes are virtual tracks that contribute to the consolidated track – either wholly (in the case of that perfect take) or in part (if you combine take edits to create the final take). The in-session advantage here is that there is one fader, one track, per actor. No matter how many scenes or takes there are, you always know where to find that actor's fader and that actor's consolidated track.

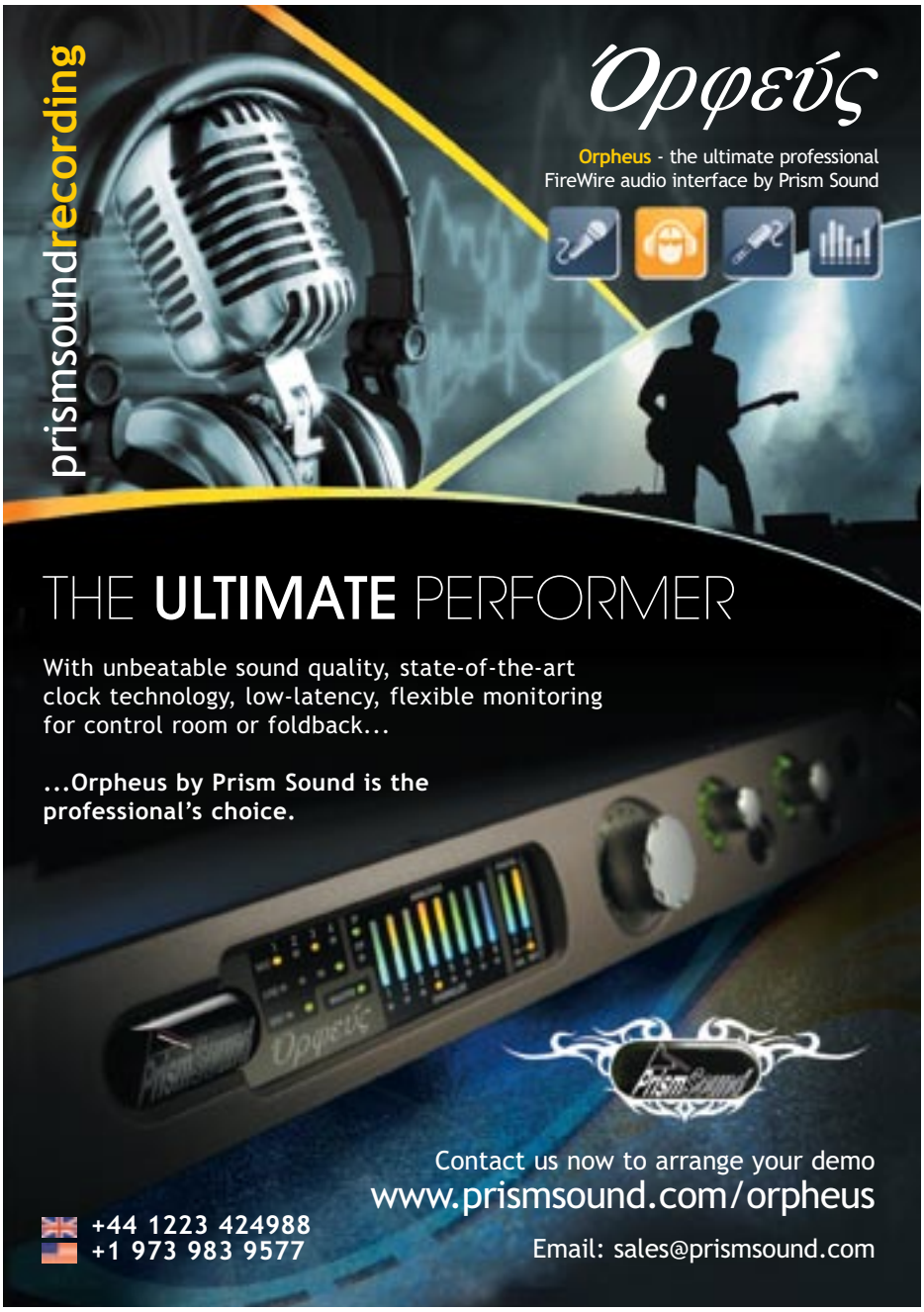
With each talent definition comes defined physical inputs and outputs, all linked into the switching and monitoring system. You can even associate buss switches with the talent or with takes, so, for example, you could reduce crowd noise with a plug-in for a specific line during record, and that will be switched in or out accordingly.

When it comes to video, the VCube system is the slave, and all the detail is still saved within a single session in Pyramix, so you don't need several different files for a single ADR session. If there isn't proper timecode with the video, Pyramix can add that for you, and even deal with the required offsets, etc.

Session On

So, when the time comes to do a take, Pyramix jumps to the next item in the loop list and switches all required monitoring, inputs, colours, GPIO switches, and so on to the correct positions – and these could be different for rehearsal and actual take. The video is cued, and any on-screen text is coloured correctly. The actor sees the script line, the colour, and hears what he or she needs to. Through pre-roll, take, and post-roll, once again the switching matrix can customise what the actors, the engineer, the director, and so on, hear. When the first take is recorded, the consolidated track takes that as the chosen take and the engineer can opt to go again, edit, adjust in and out points, split the scene into more manageable parts for new, more focused takes etc, or jump to the next scene. You only have to remember to check the 'done' box.

The consolidated track shows the final take, only expanding to show all takes when required. "So this is what would be exported essentially, either as stems to another Pyramix session or this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session itself for mixing," says Larrieu. "Or maybe exported through AAF or OMF, to Pro Tools, or Nuendo, or other machines in the workflow... or if we've been recording in BWF format, and not our proprietary PMF, these takes could essentially be consolidated as is, and sent to be recorded directly to Pro Tools or Nuendo hard disk over network.

"So there's no copy time necessary, you can retain all of your sub clips, and if you exported an AAF session, you'd have a very clean version of your editing – all your offsets and all your editing choices and any changes you've made to clip names and things of that sort is retained. And you'll also have the actual bin of every clip recorded, pre-named in an intelligent ADR fashion in a way that we actually know exactly what was recorded, no matter what."

The Big Picture

In itself, the Merging ADR Package is a module in a much bigger picture, where Merging imagines every part of the post production chain taken care of by Pyramix in whatever guise it comes – the new and powerful MassCore-based virtual studio package, or the native version for the 'satellite' positions. VCube rounds off the system and will be with you all the way up to 2K HD (and counting). However, it's not an insignificant part – not just an extra plug-in to grapple with. It's a full-on ADR session manager with enough flexibility to satisfy even the most complex sessions. Most importantly though it does what you want it to – it doesn't ask for any big shifts in working practice from the people it serves.

In context with the rest of the Merging line up, you could say it's a very nice fit. Larrieu sums up the big picture: "Pyramix is a DAW, and it is a machine with full automation. If you were in a workflow

> "Merging imagines every part of the post production chain taken care of by Pyramix in whatever guise it comes."

with Pyramix at the heart of your studio, you could do all your editing, your library work, your ADR, your music reporting, pre-mixing, mixing, and mastering of any elements of any sort within Pyramix – handle any spotting, or importing of spotting, printing the paper, ingesting with VCube, using VCube as a playback machine, and even creating billing versions of your casting elements, or your finished product that was down-mixed in Pyramix. Sound can be wrapped to the original image in just about any format, at any resolution, and given to someone either by digital delivery or on a DVD for validation, and archive purposes. So it's the entire chain in one machine, the only thing we don't have is our own microphone and loudspeaker."

INFORMATION

£ Pyramix ADR Package starts from €1,500
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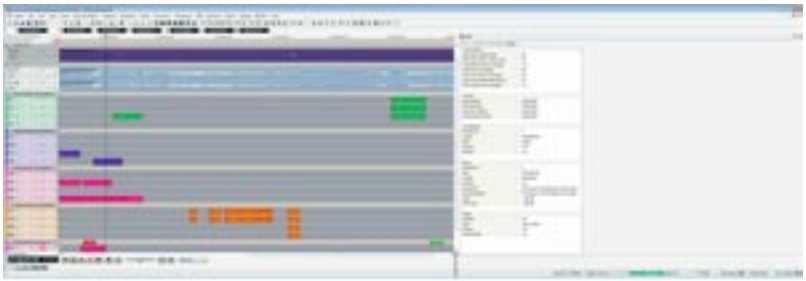

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DPA MICROPHONES

Kool Customers...

...and how to keep them coming...

Yes, Jazz really can keep a studio in the black – if the conditions are right. PAUL MAC talks to Koolworld's Dave Wooster about running rooms and keeping busy.

In the centre of Luton, there's a big music studio. And as unlikely as this might sound to those who disparage the town, Koolworld, owned by the half-and-half (live versus studio) sought-after self of Dave Wooster, is rather nice. It occupies a reasonable chunk of The Hat Factory (a Luton arts centre established by National Lottery funding), and makes good use of that building's infrastructure to provide recording and mixing services (though not exclusively) to the world of Jazz...

The Work

In overall throughput, Koolworld divides its time between jazz, educational work, production/artist development, and major label projects – often tied in with live work that Wooster has been involved with. Wooster puts the jazz content at around the 60 percent mark – built up through reputation and links with independent jazz labels, such as 33 Jazz, which happens to be based in the same building.

He is keen though to develop the production work in the studio, especially the other permanent fixture in the facility, Mat Collis, who errs more towards practical musical endeavors than engineering, and spends a good proportion of his time working on the artist development side, as well as looking after studio clients while Wooster is out occupying his live-sound persona. He ended up working with Wooster through a friend who was on a school placement at Koolworld ("I wanted to be there, so I kept just turning up.") The perseverance obviously paid off. "Matt's a very talented musician," says Wooster. "And, especially for the Jazz, he has a good appreciation of what they're doing... At the moment he's taken on more of the sessions because when I get back I need some time off – he's done the majority of the sessions in the last 12 months, and we've had really great results."

On the production business, Wooster claims it's as important as any other item: "I don't believe that any studio can survive without having some form of production work on the go, in search of the elusive deal... If it happens, then the studio's got some support from the artists that it's helped develop."

A Grand Decision

Koolworld's main studio area consists of an ample control room, plus two live rooms – one big, one smaller. The big live room has a Yamaha C6 grand as a permanent fixture. In addition, however, the studio has use of other spaces in The Hat Factory. Wooster: "Because the whole building was originally wired with Cat 5 and fibre, I can record in any part of it... from The Venue through to the gallery, from the theatre studio, to the TV studio."

To enable all this, Koolworld uses an RSS By Roland Digital Snake system, as well as a Hear Technologies Hear Back Cat 5 personal monitoring system for retuning headphone mixes. Wooster: "We really have got the whole building to play with." So far, Koolworld has completed several big band projects using the purpose-built TV studio at The Hat Factory (up to around 35-piece ensembles), as well as other projects, such as comedy nights, in the Venue and theatre workshop spaces.

There are plans afoot to split the larger live room at the studio into three, with booths for the piano and any other instrument that requires isolation. That way, says Wooster, they will be able to accommodate trios in a single room – an often asked-for facility.

The piano, states Wooster, is one of the most important pieces of equipment for a studio that relies so heavily on Jazz work. Before purchasing that particular one, much market research was undertaken – questioning piano players that came to the studio on the pianos they would like to see in the studio. An enormous range was offered, and Wooster ended up with major job – examining Steinway options in particular. "It all comes down to which model, which year," he explained. "I ended up buying a bible of Steinways – the models and the years and the people that put the things together... It all makes such a huge difference."

However, budget started to play a part, and Wooster returned to his clients with 'if you can't have that, what else would you be happy with?'. Yamaha came in as the consistent choice. "We ended up with a C6, because it's what we could afford, but the one we have has one of the most mellow high ends that I've ever heard. Any piano player that's come through the studio has commented on how good the thing is, and it's actually bedding in better every time it gets tuned, and through playing, it's really starting to achieve its own sound." Koolworld keeps a pair of DPAs and a Neumann U87 specifically for the piano.

In the control room, adorned with a good array of outboard, plus Pro Tools, RADAR, and a little-used two-inch ▸

machine, sits another source of pride – the studio's Soundtracs Jade console. This, though, is soon to be replaced, as Wooster is looking around for the next analogue front end: "The desk that we're likely to go for will be the new valve console that TL Audio is bringing out... I don't want to replace the Jade with anything less to be honest, it's been a great desk."

More generally, on the analogue front end, Wooster knows what he thinks: I personally believe it still helps with what we do – definitely for the live things, it does create a good sound, and that, after all, is what matters. As long as I feel that we're recording at a sensible sample rate and resolution on digital recorders, it benefits the project overall. We try not to do everything in the box – we try to work a combination between automation and EQ'ing, bringing things back though the desk, and then recording again."

Live Vs. Studio

With Wooster's extensive live experience (Gary Moore, Van Morrison, Leona Lewis, and more) I was keen to find whether he considered himself more 'live or 'studio', and what influence one had on the other. "I think my career to date is probably quite 50/50 at the moment... It's a great luxury to get a good balance between the two, and I think for me, the two do go hand in hand.

"Microphone technique and skills that you learn on the road apply in the studio, and techniques that you learn in the studio can apply on the road. It's also given me quite an advantage with bigger artists that I work with when I go to do TV shows. I can walk into a TV broadcast studio and work their desks and understand the constraints that they have to work to, as well as trying to push the boundaries of what they do. They're pretty much stuck in a studio environment and don't totally appreciate what can be done from the live side of things – lessening a bit of compression some days, and leaving as much of the compression to when they run it through their mastering before they go to broadcast, as opposed to squashing the hell out of it at an earlier stage.

"So, for me, it's 50/50, but if there was an honest answer, it would probably be that I was a live engineer before I was a recording engineer, that's how I started."

Talking strictly Koolworld now, it's also interesting that a single studio can become known for a particular genre, such as Jazz. Does it need particular skills? Wooster: "You have to understand how they want to capture it – you can't just say, 'Oh this is how we're going to record it'. We suggest the best way to capture it, but at the end of the day, performance is absolutely everything, and key for what they try and do.

"Some days it will involve everyone being in the same room. We do normally try and separate things a little bit and use our camera systems so they can inter-react, but if they specifically want to be in the same room, then you suck it up and take the spill with the performance. With technique, screening, good mic placement, you achieve the best sound you can achieve in rooms that you've got... That comes back to doing it old-school, where you work with the overall sound as opposed to the individual sound. It's definitely an eye opener.

"Before we got heavily involved in the Jazz, isolation was key to everything, and you kind of get used to having clean sounds on every single mic. But when you come back to doing it this way, you then really learn to take a picture of the overall sound."

The Bottom Line

Remember, it's not simply that Wooster has found a niche and is happy to work within it – the studio is a business, and it has to make money. "I don't think you can really limit yourself to one thing," reasons Wooster.

Paying customers at Koolworld range widely in requirements and budget – even to those who want to do a voice over for their Pop Idol audition – but the studio doesn't lower prices to fit everyone's needs: "We can't do £5 an hour sessions," explains Wooster. "It's not what we do – there are other studios that facilitate that. In the politest way, you tell them that there are other studios that would suit their current needs better. If they want to up the level and up the standard of what they do in that recording, then I'm sorry, you have to pay it. If you want a shock, you go to a London studio, and see how much they charge.

Luton is outside London (about 30 miles northwards), but it does have it's own international airport, fast rail links to London, and sits squarely on one of the most important motorways in the south – all advantages that many overlook when considering the town. And Wooster maintains that the core customer for him is the musician. It is the musicians, among Koolworld's client-base, who most often pick the studio; and it's the musicians who are particularly budget conscious – 'inexpensive' is a criteria that London struggles to accommodate, but that Luton has been honing for some time.

Long live the economically viable music studio... AM

INFORMATION

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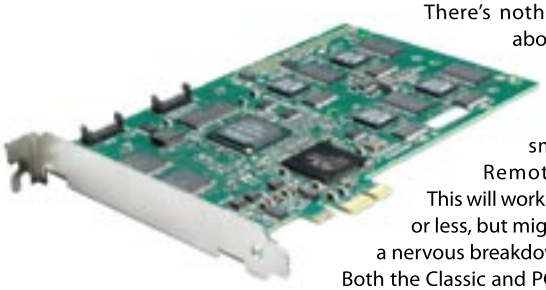
SSL DUENDE

DSP POWERED PLUG-INS

It says SSL on the box, but it's not the size of an airstrip – RICHARD WENTK pretends to be Trevor Horn in a half rack unit.

SSL may be the name that launched a thousand hit singles, tracked and mixed on desks the size of battle ships, but modern markets need smaller products, and the Duende range is an attempt to package the SSL magic into a smaller and more affordable form factor. The core of Duende is a board full of DSP chips. This is packaged in three different formats – a 19-inch 1U rack-mounting box called Classic, a half-rack sized Mini, and a PCI-E card which slots into a PC or Mac. Classic is the original version, for use in studios of all sizes. Connection with the host is by way of a couple of Firewire 400 connectors – it's possible to chain any combination of two Classics and/or Minis, as long as the Firewire link isn't trying to do anything else at the same time. The PCI-E version uses the internal bus of your Mac or PC, and doesn't offer or need any external connections.

Visually the design is reassuringly solid throughout. There's nothing unprofessional or cheap about the finish, and a Classic will look at home in a rack in any studio or facility. The Mini has a similar build quality, but is small enough to be portable. Remote bus power is available. This will work with a desktop computer, more or less, but might give a typical laptop battery a nervous breakdown.



Both the Classic and PCI-E versions offer up to 32 VST and RTAS DSP slots, while the Mini offers 16. Plug-ins are available in both mono and stereo versions, and the stereo versions use two slots – so a Mini can process up to eight stereo mix channels. It's possible to expand the Mini to 32 slots with an unlock code bought from SSL. This might seem unusual – it's like buying a console and finding half the channels have been padlocked – but it makes sense in the context of a semi-software product, and is simpler than trying to open the box to fit another circuit board. The upgrade process is smooth and simple – control click on the Duende logo, and copy in the upgrade code. Buyers have to register on the SSL site first – not a painful chore, but not something you'll want to do in the middle of a session.

The Mini is supplied with just the Channel Strip plug-in, while the Classic and PCI-E versions add the Bus Compressor. The other available plug-ins – X-EQ, X-Comp and Drum Strip – are all optional. Ten hour trial versions are included. The timer only runs while audio is being processed, and after your ten hours you'll have to visit the SSL online store.

Plugged In

The Channel Strip plug-in is a software version of SSL's XL 9000K channel strip – or alternatively, it's also a simplified version of SSL's SuperAnalogue and E-Signature hardware processors. It includes switchable E and G series three band EQ, lo-pass and hi-pass filters, a compressor, and gate/expander with a sidechain option. Old timers will find the layout familiar, but newcomers may be confused by some eccentric features, including a couple of knobs which work back to front; if you're not an existing SSL user, you may be wondering if usability has been sacrificed to tradition. More positively, this is a very powerful and creative processor, perfect for removing splash and rumble from a mix, and also for tightening up the sound. The sound has some of the traditional SSL crunch and grain without exaggerating it for effect. So this isn't so much an SSL-mix-in-a-box tool, as a good open-ended processor with some interesting colouration. Newcomers will find that SSL's online support is very good, with tutorials, FAQs, and a guided tour. Everything should start to make sense after an hour or two, but it may take longer to understand how to combine all of the elements creatively.

The Bus Compressor is a virtual copy of the XL 9000 K-series output bus compressor, but multiple instances can also be patched into individual channels (try that with a 9000 series). Even with the settings in neutral the Bus Compressor has a near-magical ability to add life and interest to a mix. With only four and a half settings to work with it's a less powerful tool than the X-Comp or channel strip compressors. But almost ▸

THE REVIEWER

RICHARD WENTK is the owner of Skydancer Media, a digital production company providing sound, image, design and consultancy services to various clients in London and the West Country.

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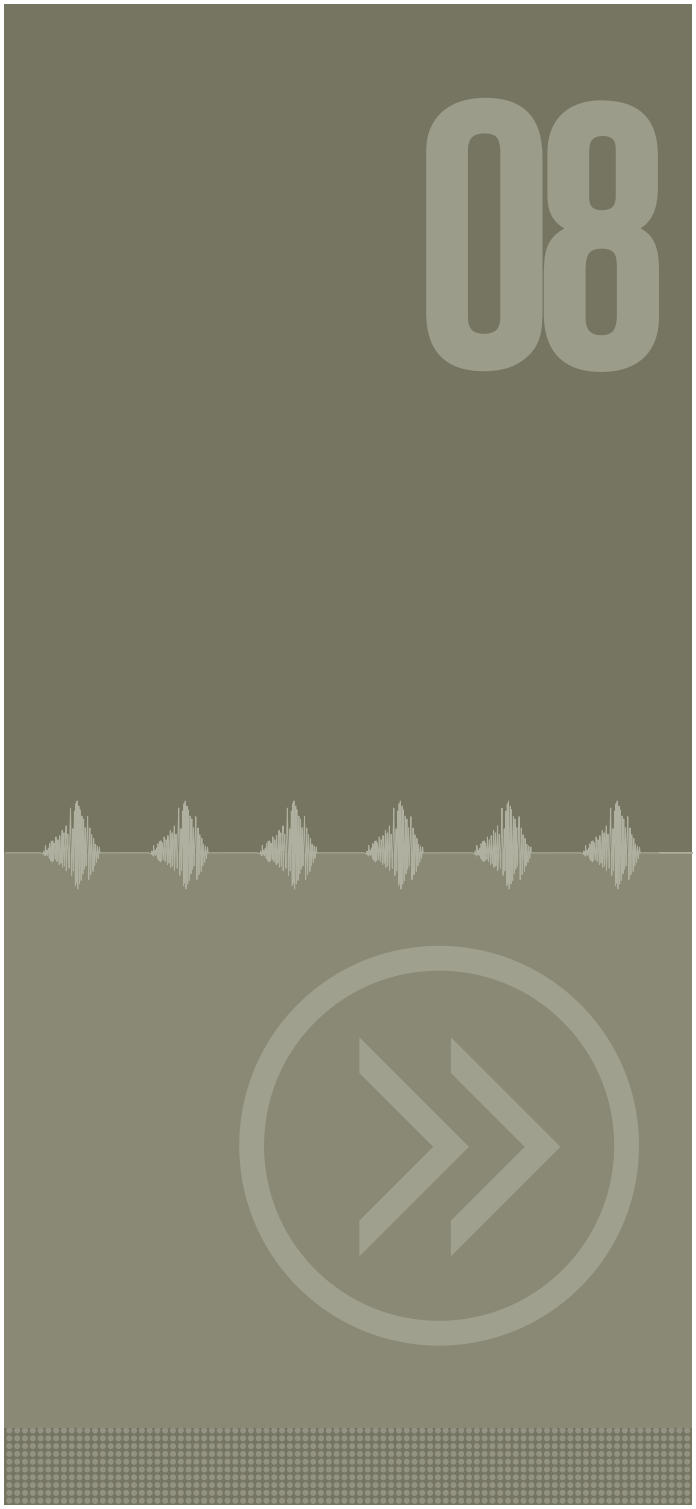

The nominations have been counted and it's now time to vote for your favourite project/person that you want to win a conch award this year. Your votes will then go forward to an independent judging panel, which will finalise the winners of The Conch Awards 2008. These will then be announced at a prestigious ceremony at The Mayfair Hotel on Thursday 25th September with the ever-popular after-party to follow.

The online voting system is now open so to vote please visit:

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Exact settings appear above the knobs as you move them – which is very nice.

anything which hasn't already been through significant compression sounds more lively and involving after a trip through the Bus Comp. You can also kill a mix by driving a very heavy roller over the dynamics, but with more gentle settings it's a very musical effect.

X-EQ is a deceptively simple-looking 10-band EQ. Two shelving and eight peaking bands should be enough for anyone, but for extra sophistication each band can be set to one of five responses – Critical, Bessel, Gaussian, Chebychev, and Butterworth. Since most users won't know the difference between Chebychev and Butterworth responses – unless they have a degree in filter design theory – more musical labelling would have been useful here. The manual tries hard to explain what's going on, but it's best to spend time experimenting with the different options until your ears can start to tell them apart. An Analyse button brings up a useful FFT display, which makes it easier to see how your settings are altering the overall EQ balance. The metering gets bonus points for showing peak, average, and dynamic range indications – exceptionally useful, and something it would be good to see copied elsewhere.

Squeeze And Twist

X-Comp is a standard compressor with a twist – two bleed filters allow high and low-end breakthrough. According to SSL most real compressors are frequency dependent, even when they're supposed to be full-band, and the bleed settings can simulate this. Again the metering is very good, with a gain reduction history and a difference display, both of which give a clearer idea of what the compressor is doing than a line of LEDs. Sonically, X-Comp can sound smooth or aggressive. It's more controllable than the Channel Strip dynamics and easier to work with. But there's no gating and no sidechain, so it's not quite as creative or flexible. The sound has some of the SSL feel, but less than the Bus Compressor or the Channel Strip.

Bringing up the rear is the DrumStrip. This adds transient processing, gating, compression, and high and low emphasis. It's perfect for heavily processed effects, but also gives plenty of play for acoustic drums. You can survive without it if drums and loops aren't your critical focus, but you'll find it very expressive and creative if they are.

No product is perfect, and some features in Duende could be fine-tuned. The virtual buttons could be clearer – I sometimes found myself peering at the screen or clicking on features to check they were on. DSP distribution could also be improved. If you load a mix of mono and stereo plug-ins, you can find yourself with two spare slots on different DSPs, and no room for one more stereo effect. To fix this, you have to save your project, restart the host and then reload your project, and there really ought to be an easier and quicker option.

A more generous preset collection would be useful, and user preset sharing would be more useful still. More technically, these are all high latency plug-ins, and impossible to use live. You won't notice while you're mixing, but you won't be able to use these plug-ins with live softsynths or samplers, or for DJing.

Otherwise this is an excellent product and an easy sell for anyone making music. The appeal is more emotional than technical – these are musical plug-ins which add a larger-than-life gloss to anything played through them. Of the optional extras, X-Comp is the most useful, followed closely by the Bus Compressor. The X-EQ is a fine addition but not quite a must-have – you can find similar EQ functionality elsewhere. DrumStrip is the most specialised of all.

With no surround support, Duende is perhaps a harder sell for post. EQ works fine as 5+1 mono instances, but the Bus Compressor, X-Comp and Channel Strip are stereo only. If you can live with that, Duende is good and can add an impressive cinematic gloss to projects, and X-EQ is a good tool for both surgical and creative EQ effects.

Conclusion

Overall the Duende range offers an impressive-sounding collection of plug-ins which are an easy step or two up from those supplied with most DAWs. Some of the more expensive native plug-in collections should consider being worried. If you want to give your projects some extra sonic credibility and richness, Duende is well worth investigating. AM

INFORMATION

£ **Duende Classic £850, PCI-E £600, Mini £399 (exc.VAT)**

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a good challenge

FROM STAGE TO SCREEN

Springtime for Hitler and Germany gave playwright CP Taylor ample material for an arresting stage production. Bringing it to a cinema audience, however, posed a good few challenges for the post team at LipSync. Report by KARL FOSTER.

Titling a movie 'Good' is just asking for it, bearing in mind film critics' propensity for biting sarcasm. However, that didn't stop Director Vicente Amorim from deploying the adjective when working up his adaptation of Cecil Philip Taylor's award-winning play for the silver screen. *Good* is set in Germany during the 1930s, a time when a particularly unpleasant man called Adolf was busy rejuvenating the country and pondering the longevity of a third German Reich. Caught up in this is Aragorn, or Viggo Mortensen to his friends. Sans stubble and Sword of Elendil (or Andúril to its enemies), Viggo plays John Halder, a literary professor whose novel on compassionate euthanasia is seized upon by the National Socialists to support government propaganda. Add a neurotic wife, demanding children, a mother with senile dementia, and a best friend who happens to be Jewish to an already Nazi situation... You can imagine how life becomes a tad tricky for Halder.

Also challenging was Amorim's vision for the production's soundtrack. He wanted clean. Fresh. Exciting. Something invoking the excitement of a society being rejuvenated. Not self-consciously 'period', but historically accurate. Quite a task, then, for LipSync's Senior Sound Mixer Paul Cotterell. He wanted to make a modern film, although a period film at the same time. He didn't want any synthetic sounds in there.

Senior Re-recording Mixer Paul Cotterell: "Good was a play to begin with. It's a very human drama because Viggo's best friend is Jewish in the film – that's the crux of the movie, this friendship."

"There's a sense of regeneration in that period in Germany. At the beginning of the film there's lots of building work – there are real, tangible improvements throughout all the cities. Everything is coming to life and it's a jubilant time. So that sense of construction and improvement is what we tried to capture."

LipSync Post, located on London's Wardour Street, has output some quality product of late, including visual effects work on *The Bourne Ultimatum* and *Stardust*. Paul relied on the facility's 5.1 Dolby room, designed by White Mark Ltd and equipped with an AMS Neve Logic DFC, 128-input desk, TC Electronics' Reverb 6000s, and the supreme capabilities of the Cedar DNS1000 for dynamic noise suppression. "We use a lot of the EQs and a gentle expander on the DFC," reveals Paul. "But the Cedar can tighten up reverb – you can subtly reduce unwanted reverberation. If you've a constant mask of a noise, it'll generally sit on it really well and not attack the dialogue in any way, if used subtly. That was part of this 'clean sound' – we wanted to be able to get quiet with the film where we needed to."

Naturally, quality monitoring is critical when indulging in a surround Dolby EX experience, hence Crown amplifiers driving JBL 3678 THX cabs for screen, 8340As for surround, and 4642A low-frequency emitters were at Paul's command.

Location sound was courtesy of John Taylor, wielding a 24-bit Zaxcom Deva multi-track, two boom-ops, several radio mics, and a painstaking approach to authenticity. Says Paul: "I would point out what a good job he did and how multi-track recording, when done properly, can be so useful. He miked lots of perspectives for us, and he shot some wonderfully wide shots of bigger scenes. There are several parties and he really got some lovely wide sounds in the big, grand places in which these parties were taking place."

Forward planning was key in realising Director Vicente's vision, hence audio was discussed in depth at a very early stage in the production. "John called us and asked us how we worked," says Paul. "We spoke about the wildtrack material – he'd already reconnoitred some of the places so he knew there may be trouble in terms of traffic in a couple of the locations, so we talked about wildtracking lines from scenes, which was really useful, just getting the actors to do their lines again without the camera rolling. We had options in that we could just cut the bits and pieces in."

With sound effects courtesy of Antonia Bates, putting Steinberg's Nuendo through its paces, and supremely accurate foley from recordist Robert Brazier, all tracks were kept live throughout the mix for maximum flexibility. Dialogue editor Sean Hannah, also of LipSync, used Titan software to assemble location sound in Pro Tools. ▸

Paul found the Foley a particularly interesting challenge: "We recorded quite a wide foley track that matched into the production, then in specific scenes – internal or heightened-awareness scenes – we shot much tighter Foley as well. There's a scene between Bouhler [Phillip Bouhler, a Nazi who headed up Hitler's early euthanasia programme, [played by Mark Strong] and Halder in which they're sliding a document across a desk to one another and there's creaking of chairs – it's the Foley that's working. Very little else. But there's this sense of tension. It's a very nice sound and I'm very pleased with that side of it."

Another unique soundtrack component was Simon Lacey's approach to the works of Gustav Mahler, recorded at Hear No Evil, Fulham. "At the most inopportune moments, one person in the room will turn round and start singing to [Halder]," says Paul. "And it's always Mahler. You can't help but draw comparisons with Dennis Potter [famed for *The Singing Detective*].

"There's a third layer of music as well. Viggo's wife in the film is a pianist and in nearly all of the domestic scenes, she's practising the piano, so that provides a backdrop to his home life and he's often talking above the piano or around it. It's always present in the room and when he comes to leave her, there's a tense scene and a piano tuner has been brought into the home. So, continually through the scene, there's a guy tuning the piano in the background, which raises the tension in the film."

Further to the success of *Good*'s soundtrack is detailed additional-dialogue recording. Some actors blanche, hide in cupboards, or claim to be 'tired and emotional' when the dreaded ADR is mentioned. No so Viggo. For the man who stormed the Black Gates of Mordor (*Lord of the Rings*) and faced down mobster Carl Fogarty (*A History Of Violence*), post-dialogue must have been a walk in the park. At least, he impressed Paul Cotterell immensely. "Viggo watched the movie through at a screening and then he came in and started to do his ADR, but he offered a lot more. We noted technical lines, and the Editor and Director put requests in for additional lines for performance reasons, but he brought a lot more to the table. He worked his way through the film from top to finish. Where he wanted to work on a line or thought he could improve something, or critically for us, he gave us lots of breaths and slight reactions – very subtle nuances and additions. Once he'd seen the edit, he was able to enhance parts of his performance.

"Some actors enjoy ADR and some actors really don't, but he's probably the most giving in that sense. I've never seen anyone offer so much. What was extraordinary was that while he was recording in one studio, they were combining the takes, and I did a temp mix with the other ADR for different scenes. We spent a morning with Viggo playing back the ADR and just talked about the way he performed and the spaces that he left between the lines – the gaps and nuances in his delivery.

"He just made me very aware of his performance and his timing. When we came to the mix 'proper', we would leave a lot of spaces, so he would deliver a line and you were left to look at him and digest the line. Rather than just filling up everything, there's quite a lot of space in the mix for that dialogue. Other actors respond slowly sometimes – sometimes it's quick-fire dialogue – but Viggo's such a busy actor. Facially he's very busy and there's

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a lot of great close-ups where he's delivered a line. Occasionally, we'd use a bit of Foley in those gaps just to help it, but sometimes it's the space that's important, and that's what I learnt from him."

Paul stresses the need for a top-notch team dynamic when working on a project as radical as *Good*. "At the mixing stage, we didn't have that long to work, and everyone had to be doing their jobs properly and efficiently. We didn't have time to waste. We essentially spent a lot of time looking at ADR and choosing it before we got to the mixing stage, so there wasn't too much to ponder at the mix.

"We all attended the spotting sessions. Often, an Effects or Dialogue Editor, or Supervising Sound Editor, will sit with the Picture Editor and Director and work through the film, talking specifically about which sounds are needed and the intention of each scene. Fortunately, I was able to go along to those sessions as well, so I was party to all of those conversations, so we were very cohesive in that sense. I spent time with Antonia [Bates], looking at what she'd done, and she talked about what she intended. We cut down time in the theatre because we had a cohesive plan of action."

An important strategy indeed, because at the outset: "We talked about the soundtrack before we'd seen any of the film, so it was really puzzling when we first heard that in one of the early incarnations, there wasn't going to be a score – just the songs, sound effects, and atmospheres, which would have been a very bold move. Obviously, that changed over time. What we tried to do was to capture the period through things like accurate sounds of clothing – the uniforms and suits of the time, the shoes in the hallways, and so forth. It was a difficult brief."

Producer Miriam Segal is cock-a-hoop with the result, however. "I had a great experience producing *Good* with LipSync; having all departments under one roof made for a slick but flexible post-production process. The company also has a 'face'. You feel like you are being brought into the family and they will look after you and your film, just as they do their employees. I didn't even hesitate when deciding where to take my next film. I hope that LipSync will remain a great post-production partner for many projects to come."

Good is scheduled for theatrical release in 2008, so if you just cannot live without Mahler, keep your eyes on the Internet Movie Database (www.imdb.com).

INFORMATION

Project: Good
Studio: Hear No Evil, Fulham
LipSync Theatre 1, Wardour St, London
Director – Vicente Amorim
Supervising Sound Editor – Paul Davies
Sound FX Editor – Antonia Bates
Dialogue Editor – Sean Hannah (LipSync)
Re-recording Mixer – Paul Cotterell (LipSync)
Assistant Mixer – Steve Shaw (LipSync)
Original Music – Simon Lacey
Foley Recording – Robert Brazier
Report – Karl Foster

FlashMic Case Study

Classic FM journalist Sarah Kirkup interviews opera star Natasha Marsh with the HHB FlashMic at the Classical BRIT Awards in London

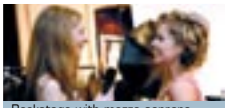
Sarah and broadcaster Bob Jones catch a moment with pianist and Classic FM presenter Myleene Klass

Former principal with the Royal Ballet Darcey Bussell chats to the FlashMic

Grabbing a few seconds with singer and TV star Amy Nuttall

On the red carpet with violinist Nicola Benedetti

The great Plácido Domingo talks to the FlashMic



Backstage with mezzo-soprano Katherine Jenkins

CLASSIC FM AT THE CLASSICAL BRIT AWARDS

Covering the Classical BRIT Awards in London for Classic FM, journalist Sarah Kirkup used her HHB FlashMic Digital Recording Microphone to gather interviews for Classic FM Magazine, and for broadcast on air and via podcasts.

"With no fiddly cables, the FlashMic was so easy to use" comments Sarah, who also picked up on the effect that the FlashMic's physical presence had on potential interview subjects. "Everyone on the red carpet seemed happy to stop and speak into the FlashMic and I'm not sure that that would have been the case with other handheld recorders. The sound quality of the FlashMic is so good that I only had to listen to each interview once when transcribing for print, and locating and downloading the interviews for broadcast could not have been more straightforward."

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NEW MICROPHONES

Cables at the ready as *Audio Media* plugs in the latest round of microphone releases.

"Microphone: an instrument for converting sound waves into electrical energy variations which may be reconverted into sound after transmission by wire or radio after recording." So reads a typical dictionary definition of a 'long-ish' word, long since established in modern-day English vernacular. History has seen many different sounding microphone designs come and go over the last century or so, yet new ones still keep popping up. It's a hotly contested marketplace as attested by the following models released within the last year.

According to Product Manager Thomas Stubics, **AKG Acoustics**' C 214 "...was designed as a budget-friendly alternative to the leading-edge C 414 family; because the C 214 uses the same one-inch diaphragm as the C 414, the essence of that heralded C 414 has been captured in this newest model." The C 214 road-tough construction is based around a dent-resistant metal grille that ensures high RF immunity without affecting its acoustical performance, plus a gold-plated XLR-type output.

www.akg.com

New from **AKG** is the Perception Series, comprising the P 120, a 2/3-inch diaphragm-equipped condenser mic with a wide, extended frequency response for general applications; P 170, a 1/2-inch diaphragm-equipped condenser mic with a cardioid polar pattern for acoustics, drums, and percussion; P 220 one-inch diaphragm-equipped condenser mic with a switchable bass roll-off and pre-attenuation pad, ideal for high sound pressure levels; and P 420 multi-pattern, large diaphragm-equipped condenser mic.

www.akg.com

Available as of March 2008, **Audio-Technica**'s AT2020 USB is billed as being an affordable (£99.95, inc.VAT) large-diaphragm studio condenser mic featuring USB connectivity for (Mac- or PC-based) computer-based recording. Featuring a custom-engineered low-mass diaphragm, low self noise, and an extended frequency response, the AT2020 USB has a fixed cardioid polar pattern while phantom power is drawn from the USB connection itself. Ships with a tripod desk stand, stand mount, and carry pouch.

www.audio-technica.com

Californian company **Blue Microphones**' Snowflake is effectively a portable version of its popular Snowball Professional USB Microphone, combining a USB bus-powered capsule with a class-compliant design for true plug-and-play on Mac and PC computers. The mic itself folds into a compact case that also houses a USB cable to aid transportability; unfolded, the case itself serves as a desktop stand or a laptop clip – perfect for podcasting, webcalling, or song sketching on the go.

www.bluemic.com

German microphone-maker **Brauner**'s recently-introduced Phanthera V, a version of its cardioid-only Phanthera released last year, but with the same variable characteristics applied to its Phantom Classic to produce the Phantom V; as such, the Phanthera V is also capable of recording in omni or bi-directional modes via a simple switch. This makes it suitable to form one part of an MS or XY stereo pair, for example.

www.brauner-microphones.com

CAD Professional Microphones' Trion 8000 is the flagship model in its relatively recently released new line of studio microphones. A multi-pattern, externally biased, large dual-diaphragm studio tube condenser design, the Trion 8000 incorporates a precision-machined, hand-assembled capsule with low-mass 1.12-inch gold-vapour-deposited, hand-dampened diaphragms. A three-position polar pattern switch provides omnidirectional, cardioid, or figure-of-eight selections, while discrete Class A electronics ensure transparent sound reproduction.

www.cadmics.com

CharterOak Acoustic Devices' M-900T is a new small diaphragm vacuum condenser microphone, employing the same cardioid, hyper-cardioid, and omni capsules used in its popular M900 transformerless small diaphragm condenser, combined with a vacuum tube head amplifier and US-made Cinemag output transformer. Other notable features include a two-step sensitivity switch (0dB and -15dB), and 75Hz bass roll off.

www.charteroakacoustics.com

Crowley And Tripp's Naked Eye Roswellite ribbon microphone features the company's same nanocomposite ribbon material (Roswellite) first introduced in its el Diablo Mercenary Edition microphone, which sharing the True Dual Voicing design and carefully-crafted tone of the Naked Eye Classic. The Naked Eye Roswellite comes complete with a lifetime warranty, wooden storage box, and low-diffraction rotary Monocle Mount.

www.soundwavesresearch.com

Also new from **DPA Microphones** is the recently launched 4017, a short and exceptionally lightweight shotgun microphone offering a highly directional pickup pattern. The Danish company also worked hard to produce on the practicalities of its design, weighing in at only 71g with a short body length of 210mm. "If you've ever tried holding a mic boom for more than 10 minutes, your arms will appreciate the low weight of the 4017," stated Sales and Marketing Director Paul Koza.

www.dpamicrophones.com

DPA Microphones' 4080 miniature cardioid lavalier mic has been developed to provide optimum speech intelligibility for applications including broadcast, recording, and live performance. Designed to be body-mounted around 20 to 25cm from the mouth, the DPA 4080 is acoustically pre-equalised, offers a 4dB presence boost to improve speech intelligibility and definition, and comes complete with a pre-mounted pop filter in a robust holder with shock-mount.

www.dpamicrophones.com

Earthworks Audio's PM40 PianoMic System comprises two Random Incidence High Definition Microphones especially designed to work inside a piano with its lid open, half-closed, or fully closed, providing high gain before feedback with virtually no leakage of sounds of other instruments from outside the piano – perfect for churches, recording studios, touring sound, and performing arts centres, according to its creator.

www.earthworksaudio.com

Holophone's surround technology is a patented audio recording system designed to address audio challenges when recording multi-channel sound. The HD-3 is the newest addition to its range, marketed as being the world's most inexpensive professional surround sound microphone, featuring five multi-directional, full-bandwidth microphone elements, and a discrete LFE microphone in one integrated capsule.

www.holophone.com

Josephson Engineering's new C617 represents their second-generation high-voltage metal diaphragm omnidirectional mic. Operating from standard 48V phantom power, yet providing full 200V polarise potential for a lab-grade standard half-inch mic capsule, the C617 is supplied with a Microtech Gefell MK221 capsule. The Josephson cascode FET front-end circuitry introduced in the C606 has been further refined.

www.josephson.com

JZ Microphones' The Black Hole is a handcrafted, multi-pattern (cardioid, omni, figure-of-eight), studio condenser design featuring a Class A discrete amplifier circuit, two opposing-positioned true electrostatic capsules, custom-designed capsule with single-tap diaphragm and adjustable backplate, variable sputtered diaphragm, and integrated capsule shockmount. Recently, it's been joined by a fixed-cardioid version (BH-2) and fixed-cardioid version with a pad switch (BH-3).

www.jzmic.com

M-Audio's Pulsar II is a relatively new small-capsule condenser microphone featuring a six-micron Mylar evaporated-gold diaphragm capsule design – ideal for studio and stage applications. Other notable features include a solid brass backplate for natural, transparent sound; low-distortion Class-A FET electronics; and switchable 10dB pad and 80Hz high-pass filter (Also available as a matched pair).

www.m-audio.com

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**AT2020 suggested retail price*

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www.audio-technica.com

According to **Mercenary Audio**, its KM-69 "...is an entirely new microphone developed from our desire for a [Neumann] KM-84 for hi-hats." As such, the KM-69 is the culmination of many years of working with manufacturers, the next logical step after its Mercenary Edition products, where an existing product is often given a total overhaul. The KM-69 purportedly sounds very close to the KM-84, while offering better clarity and detail without sacrificing depth, making it ideal for acoustic instrument applications.

www.mercenaryaudio.com

Microtech Geffell's UM 930 is a studio condenser microphone with switchable characteristics, combining modern large-diaphragm capsule technology with the latest in semi-conductor circuit topology to suit universal miking applications in broadcast and sound studios. It's a side-address microphone with the five switchable patterns marked on its body.

www.microtechgeffell.de

MXL Microphones' new V88 is a large-diaphragm, pressure-gradient condenser microphone with a fully balanced, transformerless output. Features include a 32mm large capsule; gold-spluttered, six-micron diaphragm; low-noise FET pre-amp; 20Hz to 20kHz frequency response; and Class A electronics (Comes complete with a high-isolation shockmount and aluminium flight case).

www.mxlmics.com

Neumann recently celebrated its 80th anniversary with the launch of the TLM 67. In many ways the TLM 67 is based on the company's 1960s-vintage U 67 – incorporating the same K 67 capsule, but with newly-designed circuitry that closely reproduces U 67 characteristics without the use of tubes. Switchable directional characteristics (omnidirectional, cardioid, and figure-of-eight), selectable 10dB pre-attenuation, and a high-pass filter, allow detailed adjustments to be made according to recording applications.

www.neumann.com

Berlin-based microphone manufacturer **Neumann**'s TLM 103 D is a digital (AES 42) version of its well-established TLM 103 home and project recording-orientated large-diaphragm microphone, available in nickel and black with an included stand mount. Specs include 44.1, 48, 88.2, 96, 176.4, and 192kHz sampling rates; 20Hz to 20kHz frequency response; and a 127dB dynamic range.

www.neumann.com

Red Microphones' Type A tube microphone is based on a system of nine interchangeable capsules called The Redheads. The Type A includes a custom-built flight case, a high-definition tube mic cable, shockmount, and the innovative PowerStream power supply, which not only insures ultra-stable performance, but also features a soft-start feature that maximises tube life and minimises start-up time.

www.redmic.com

RØDE Microphones' all-new NTG-3 shotgun microphone is designed to withstand adverse environmental weather conditions, incorporating a technology known as RF-bias, rendering it almost completely resistant to moisture. Technically, its true-condenser super-cardioid capsule accepts standard 48V phantom power to deliver high-sensitivity recording with a quoted 40Hz to 20kHz frequency response.

www.rodemic.com

Other than differentiating different coloured logos and thicker ribbon elements – with attendant lower transient responses – to make them more durable and better able to stand up to the rigours of the road, there are no differences between **Royer Labs**' new Live Series microphones (R-121 Live ribbon, R-122 Live phantom-powered ribbon, and SF-24 Live stereo phantom-powered ribbon) and their studio-bound counterparts (R-121, R-122, and SF-24).

www.royerlabs.com

The CMIT 5U is the latest from long-established German microphone manufacturer **Schoeps**, and, as such, represents its first foray into shotgun microphones. Three filters are provided: high-frequency emphasis enhances speech intelligibility; a steep low-cut filter suppresses wind and boom noise; and a gentle low-frequency roll-off compensates for proximity effect.

www.schoeps.de

The **sE Electronics** Gemini II represents "ultimate design... a no-holds-barred piece of microphone history", according to the manufacturer. A dual-valve design with a 12AX7 input valve coupled with a 12AU7 input valve on the output stage in place of a transformer, the all-new Gemini II now has a 10dB pad and bass cut, a brand-new brushed aluminium PSD, and lower signal-to-noise ratio.

www.seelectronics.com

Sennheiser's just-introduced MKH 800 TWIN is a 50kHz frequency response-capable dual-capsule microphone that provides two separate sound signals at the microphone output, allowing the pickup pattern to be remotely fine-tuned and corrected at the mixing console.

www.sennheiser.com

The **Shure** KSM27 is a side-address condenser microphone with a cardioid polar pattern. It features an externally biased, one-inch (ultra-thin, 24 carat gold-layered, low-mass Mylar) diaphragm; low self-noise; Class A discrete transformerless pre-amp for transparency, fast transient response, and no crossover distortion, while minimising harmonic and intermodulation distortions.

www.shure.com

Dorset-based British microphone designer/developer **Sontronics**' recently introduced STC-6 condenser microphone features a redesigned body with grip-aiding grooves and various additional features, including a 0dB/-10dB pad and linear 75kHz high-pass filter, and comes complete with a mic clip, all safely housed in an aluminium flightcase.

www.sontronics.com

Resulting from a five-year R&D programme, the **SoundField** DSF-2 Broadcast Microphone System represents the latest generation of SoundField technology, comprising a four-capsule microphone and the DSF-2 Digital Microphone Controller, which outputs stereo, M/S, and the four-channel B-Format that can be decoded into any current or future surround format using the hardware SP451 or Surround Zone plug-in. All mic parameters can be adjusted from the controller without having to physically move the mic.

www.soundfield.com

SoundField's new SPS200 A-Format microphone is the first SoundField mic that does not require an accompanying control unit; as such, a short breakout cable outputs the SoundField A-Format on four balanced XLRs. All processing takes place in the bundled software plug-ins (available for Digidesign Pro Tools HD and all platforms supporting multi-channel VST), while the relatively lightweight (220g) mic itself is powered by standard 48V phantom power and incorporates four low-noise, studio-grade condenser capsules.

www.soundfield.com

Telefunken|USA's Ela M 260 small-diaphragm condenser features a 'new old stock' Telefunken EF-732 tube and a custom-wound transformer from AMI/TAB-Funkenwerk, and comes complete with a set of interchangeable cardioid, hyper-cardioid, and omni-directional capsules, as well as an adaptor to allow the use of most AKG CS series capsules, together with other capsules made by Red/B.L.U.E. and JZ/Violet. Systems also include a wooden mic box, 10-metre Gotham Audio cable, shockmount, mic clip, owner's manual, and 10-year warranty.

www.telefunkenusa.com

Violet Design's recently-launched The Wedge is a high-quality studio microphone that uses a large true electrostatic single diaphragm to provide high output (130dB) and full sound spectrum (20Hz to 20kHz). Its transducer capsule is internally damped from vibration and resonance while the double mesh head helps deliver a transparent, natural sound. The Wedge ships with a stand holder, while three different optional shock mounts provide additional protection from external subsonic interference.

www.violet-design.com

Built to order as a so-called AEA Service Shop (Pasadena, California) Special at a list price of $5,800, **AEA**'s new phantom-powered Big Ribbon A440 purportedly has the greatest useable dynamic range of any ribbon microphone manufactured today, and, according to company founder Wes Dooley, is "... the quietest ribbon microphone in existence." The A440 has a flat frequency response and an accurate figure-of-eight polar pattern down to 20Hz.

www.wesdooley.com

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Lynx Studio Technology

HD Acquisition

Delving behind the silver screen, KEVIN HILTON takes a look forward to what we can expect of HD's impact on the industry.

Cameras have developed over the past 20 years to give cinematographers and operators a broad range of tools for different aspects of film and television production. Although the gaps between camera technologies in the high, mid, and low end markets have contracted in recent times there is still a big demand for high quality cameras and acquisition formats that can rival film and the older style of equipment.

High definition is certainly providing that in television, both for live events, sport in particular, when working in interlaced mode, and increasingly for documentaries and drama, which are shot using the progressive format. Due to adjacent lines of a picture being scanned in succession, progressive produces a frame-based look similar to film, which is why high end TV drama producers see it as a viable alternative to Super 16.

For many, and not just traditionalists such as compiles and the older generation of directors of photography, HD does not match the depth and warmth of film. The ideal would be an electronic means of capturing pictures that, like HD, could be connected to a digital intermediate (DI) post-production system so the footage can be worked on and distributed as data but which are more like film than video.

This desire has resulted in what is regarded as the next generation of filmmaking device, the digital cinema camera. Huge amounts of money have been spent on research to allow pictures to be recorded as data on tape or hard disk. Major productions are now in progress using this latest technology, but there are still doubts over performance and reliability, giving, for the time being at least, HD a short lead in the race to be the dominant acquisition format of the future.

During the late 1980s there were attempts to break the monopoly of film in commercials, music promo, and feature production using the then analogue high definition systems, one of which, somewhat confusingly given the recent development of the lower end digital format for DV tapes, was known as HDV. The two notable films made at the time, *Julia and Julia,* and *Crack In The Mirror,* are now merely footnotes in the history of HD.

The equipment used to make those films was cumbersome and involved connecting the camera to video recorders in a truck by means of lengths of cable. What filmmakers wanted was a video or other kind of media version of the film camera; self-contained and easy to move. HD camcorders certainly provide that, and while the camcorder may be mostly identified with general TV production and newsgathering, the top-of-the-range models have been designed as modern equivalents of Arri and Panavision cameras.

Sony staked its claim with the HDCAM format, with the higher end of the range branded as CineAlta. The first in the series was the HDW-F900, which is still the flagship today in the upgraded form for the F900R. The HDCAM recording system uses the 8-bit DCT (Discrete Cosine Transform) 3:1:1 method for a recorded video bit rate of 144Mbit/s.

In HDCAM the picture data being recorded, either progressively or interlaced, is stored on tape with each frame as a separate and individual entity. These are arranged in 12 diagonal strips along the tape and are read using the Helical scanning method (see glossary). To produce a filmic result the F900 operates at 24p (24 frames a second, progressive), and for greater mobility the R version has a smaller and lighter optical section and recording mechanism.

The film and TV production business clearly saw the F900 as a serious alternative to film cameras, to the point that Panavision produced its own version for the feature market. The 'Panavised' F900, the HD900F, has a 4:1 zoom lens and follow focus capability, augmented by a number of hardware additions that are far more familiar to directors of photography who work primarily in film.

Panavision added a viewfinder arranged in three sections that attach to the existing support rails. This bracket accommodates either the viewfinder itself or an extension unit for the housing. The lens mount is similar to Panavision's usual film configuration, only marginally bigger to cope with the 11:1 zoom lens that was part of the original re-design, used by George Lucas for the recently made first three instalments of the *Star Wars* saga.

The Panavision lens was originally designed for 35mm film work, but in a video setting the frame size is two and a half times bigger than the imaging array of the F900. Consequently the lens for the HDCAM camcorder had to give a smaller image but be sharper to compensate for the amount of magnification required to project the finished images. A new lens mount and front plate were also needed to support the extra weight of this lens. Lenses produced by Panavision since the launch of the HD900F, now augmented by the HD900R, have been configured for HD and offer similar resolution.

SOUND PRO'S VIDEO GLOSSARY

Helical scanning

During the days of audio tape recording, sound quality could be improved by increasing the speed at which tapes passed over the static record head. For a video device to cope with the huge amount of data needed to accurately capture the picture (and sound), the tape would have to travel at immense speeds if the record head did not move. That is clearly impractical so the helical scanning drum was developed to keep tape speeds at a sensible rate while still being able to pass on all the necessary information. This has been used since the days of earlier analogue video formats, including Beta SP, and is still regarded as an effective method in the digital age. The ½-inch wide HDCAM tape is wrapped around the majority of a 75cm (3-inch) drum, making contact at one edge and leaving at another. At no point does the tape come in contact with the bottom centre of the outside of the drum. This forms the shape of a helix, hence the name of the system. Because the HDCAM mechanism has four heads the tape is always in contact with two of them; as the heads are turned on and off information is recorded in strips at shallow angles on to the tape.

Film And TV Cinematography

news

Filmmakers today are looking forward to a time when not only film but also videotape is removed from the production process. Panasonic is continuing its part of that campaign with new versions of its VariCam camcorders using P2 solid state media.

The VariCam 3700 (model AJ-HPX3700) and 2700 (AJ-HPX2700) are HD camcorders that deliver master-quality, full-resolution 10-bit 4:2:2 AVC-Intra 100 recording; variable frame rates in one-frame increments; HD-SDI output of 23.98PsF/24PsF; and a multi-gamma function to match film stock, which has been an important selling point for the established VariCam cameras.

The 2700 is a solid-state version of Panasonic's DVCPRO HD VariCam and features three 2/3-inch native HD resolution CCDs. It produces cinema-quality, independent frame 1080 and 720 images with 4:2:2 10-bit sampling in AVC-Intra 100. The camera records using the more bandwidth efficient AVC-Intra 50 compression as well as DVCPRO HD. The VariCam 2700 is intended for sports, documentaries, independent films, and any project for which flexibility would be an advantage, and also delivers advanced gamma settings, variable frame rates (from 1fps to 60fps in 720p mode) and two separate HD-SDI outputs.

At the top of this new P2 range is the VariCam 3700, which is aimed at feature films, episodic television and commercials. It gives full native 1920x1080-pixel acquisition and independent frame recording with 10-bit/4:2:2 sampling. The three HPX3700 2/3-inch 2.2 megapixel CCD camera also gives a 4:4:4 RGB dual-link live output, seen as a benefit for productions working with visual effects. The VariCam 3700 records in full-raster 1920x1080 resolution in AVC-Intra 100, and records in AVC-Intra 50 and DVCPRO HD as well. Its variable frame rate function has a range from 1fps to 30fps in one-frame increments, and is equipped with three HD-SDI outputs (dual-link plus monitor).

Both the VariCam 3700 and VariCam 2700 can be switched between 59.94-Hz and 50-Hz recording.

Five P2 card slots allow continuous recording, card selection, hot swapping, loop rec, pre-rec, interval rec, and one-shot recording. Five 32GB P2 cards allow recording for up to 200 minutes in AVC-Intra 100 at 1080/24p, 400 minutes in AVC-Intra 100 at 720/24p, 320 minutes in other AVC-Intra 50 formats, and 160 minutes in other AVC-Intra 100 or DVCPRO HD formats. These capacities will be doubled if operators use the new 64GB P2 cards, which are due for release later this year.

Among the image enhancing features on both camcorders are 14-bit A/D processing, Chromatic Aberration Compensation (CAC) to maximise lens performance, Dynamic Range Stretching (DRS) for wide variations in lighting, unique shutter angle settings, built-in scan reverse, and full control of matrix and colour correction for precise image matching.

The VariCam 3700 and VariCam 2700 both have a high sensitivity of F10 at 2,000 lx and feature 48-kHz/16-bit, four-channel digital audio recording.

Text memos and shot markers can be added to the recordings and an additional circuit board, the AJ-YAX800G, makes proxy data recording possible. Other features include scene files, user buttons, user menu and focus assist functions, and newly designed, two-wheel (ND and CC) optical filters.

Panasonic expects the AJ-HPX3700 and AJ-HPX2700 to be on the market during this autumn.

Other hardware modifications include a different handle on top of the camera, a new base plate to give greater stability on a tripod, and a voltage distributor with outputs for both 12 and 24 volts. This allows video and film accessories to be connected and run in conjunction with the camcorder. Inside the camera a filter was inserted before the two in-camera filter wheels. Used with Panavision lenses this makes the processing and recording of red light more as it is dealt with by the human eye and film.

This means the red amplifier, a necessary device in video cameras to electronically increase sensitivity to this part of the colour spectrum, has been turned down in the HD900F. Another electronic difference is the absence of definition enhancement. Traditionally video devices have been fitted with a circuit board to increase the sharpness of images, usually by electronically hardening the hard edges in a picture, thereby producing a sharper effect. Panavision felt this was unnecessary due to its Primo Digital lenses, and so has turned off the image enhancement electronics.

Panasonic's film-style HD camcorder has a definite look of traditional cameras and is designed to operate at a number of frame rates in much the same way as celluloid. Because of this, the AJ-HDC27HE is also known at the VariCam but, like the more general production camcorders in Panasonic's high definition range, it also operates on the DVCPRO HD, or DVCPRO 100, format.

DVCPRO HD uses four parallel codecs and a coded video bit rate in the region of 100Mbit/s, with the actual rate depending on what format is selected. Pictures are encoded using 4:2:2 colour sampling. For 720p, images are pre-filtered to give a recording with a resolution size of 960x720, while 1080i is processed to either 1280x1080 for 59.94i, or 1440x1080 for 50i.

The AJ-HDC27HD operates at frame rates from four to 60 frames a second and is able to recreate the speeds found on a film camera, which can be used for different effects, such as slow-motion and time-lapse. The camera also offers gamma image quality that is comparable to film, producing a picture with a full dynamic range that can be projected.

While HD has helped create camcorders that cinematographers have started to regard as closer to film than previous video formats there are still doubts over the resolution and the amount of compression involved. Because of this, Thomson (Grass Valley) took a different approach in designing its digital HD camera, the Viper, by using an uncompressed 4:4:4 signal. This has produced something much closer to film, which was also the aim of the developers of digital cinema cameras. Both will be discussed in the next Video Guide.

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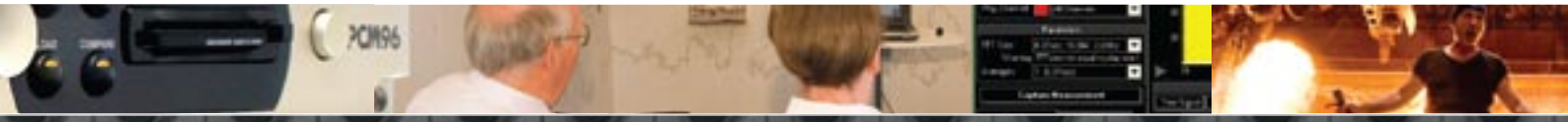

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AMSR is the regular AUDIO MEDIA Sound Reinforcement section, aimed squarely at SR professionals across Europe. Following the *Audio Media* ethos, the emphasis will be on the product reviews and technical features written by working industry professionals that anybody in SR will find relevant and useful.

Klein+Hummel has introduced the KPA Series of audio power amplifiers operating at levels as high as 6000W into 2Ω (KPA 2400) down to models providing 1100W into 8Ω (KPA 2220). The new amps can be daisy-chained together using CAT5 for both digital audio distribution and remote control, and monitoring of all amplification functions, including load monitoring.

www.sennheiser.co.uk

www.sennheiserusa.com

Audio-Technica kicked off its 'Road To Success' three-week, seven-location UK tour at Lingfield Park racecourse on May 21 and 22, where the company's new ATCS-60 infrared conference system made an exclusive pre-launch appearance prior to its official unveiling at InfoComm 08 in Las Vegas on June 18 to 20.

www.audio-technica.co.uk

KIND Audio has launched its new two-channel KDX and four-channel KQX series. Seven KDX models range from 2x 300W to 2x 1500W into 4Ω (all offering higher power 2Ω capability), while the KQXs range from 4x 400W to 4x 700W into 4Ω. All are based on Class D output circuitry, controlled by the company's patented TeoTon technology to provide low distortion and high efficiency.

www.cuk-audio.co.uk

www.kindaudio.com

Over 40 participants from seven European countries attended the most recent DYNACORD Academy in Straubing (Germany). Running from April 13 to 15, its central seminar theme was Concert Sound, including workshops dealing with the IRIS-Net integrated software platform in conjunction with Power H amplifiers, plus various loudspeaker systems (Cobra 4 and 2, Xa2), and the multi-function VariLine loudspeaker system.

www.beyerdynamic.co.uk

www.dynacord.com

All Change At Harman (Professional UK)

Sound Technology acquires Harman Professional UK's Distribution

Californian-headquartered Harman International Industries has announced that it has sold Harman Professional UK's distribution business for its Professional Group in the UK and Ireland to Letchworth-based independent UK distributor Sound Technology. The agreement transfers a team of sales professionals and exclusive UK and Irish distribution rights for JBL Professional, Crown, Soundcraft, AKG, dbx, BSS Audio, and Lexicon products.

Stated Harman Professional Chief Executive Officer Blake Augsburger: "Sound Technology is a premier pro audio distribution business in the UK and Ireland with strong market knowledge and a commitment to selling systems across Harman's served vertical markets. This direct-to-third-party shift provides Harman [with] the entrepreneurial drive necessary to support its international go-to-market strategy."

For its part in the proceedings, Sound Technology's Chairman, Robert Wilson, commented, "We are thrilled to be representing the legendary professional brands of Harman International. The acquisition of Harman Pro's UK distribution, with its portfolio of advanced solutions, reinforces Sound Technology's position within the MI industry, whilst substantially expanding and diversifying the company into the vertical markets of installation, broadcast, and touring sound."

Sound Technology
+44 (0)1462 480000
www.soundtech.co.uk
Harman Pro UK
+44 (0)1707 668181
www.harmanprouk.com

Lawo Buys Into Innovason

Continuing this month's apparent theme of company buyouts and buy-ins, German radio and TV broadcast mixing console and matrix systems developer/designer Lawo has acquired a majority shareholding in French live digital mixing console manufacturer Innovason, officially ending the latter's receivership period while providing a strong partnership for the future.

Innovason's Sales & Marketing Director, Xavier Pion, views this development as being a perfect fit for both companies, stating, "It's no secret that we had been looking for a development partner for quite some time. We explored a number of possibilities, but none seemed to be quite the match we were looking for until Philipp Lawo expressed an interest. As a leading manufacturer of high-end digital broadcast consoles, Lawo's expertise in the digital domain is beyond question. We have similar areas of competency geared to live market. I believe that the opportunities created by the synergies of such complementary technologies in two quite different markets will be significant for both parties. I am delighted to have concluded the agreement, and look forward to a rich partnership."

Lawo CEO Philipp Lawo concurred: "Our investment in Innovason adds a new dimension to our activities at Lawo. The opportunity to create new synergies will be to the benefit of both companies. Innovason is a strong brand in the live sound market, and we are looking forward to taking it to the next level."

Lawo
+49 7222 1002 0
www.lawo.de
Innovason
+33 2 97 24 34 34
www.innovason.com

Maiden's Flying Faders

DiGiCo's D5 flies high with Iron Maiden

Iron Maiden have toured the world many times over, but the Somewhere Back In Time World Tour 2008 – opening in Mumbai, India on February 1, before continuing through Australia, Japan, Los Angeles, and Mexico, followed by the Legendary heavy metallers' first ever concerts in Costa Rica and Columbia, then on to Brazil, Argentina, Chile, Puerto Rica, and New York, finally finishing up in Toronto, Canada on March 16 – made use of a specially converted Boeing 757 airliner to transport not only the band plus its 50-strong crew, but also 12 tonnes of production equipment suitable for venues holding up to 50,000 people. Notably, said airliner – nicknamed Ed Force One in honour of the group's monstrous 'Eddie' mascot – was piloted by none other than Maiden frontman Bruce Dickenson, who commented, "I have been flying commercial passenger jets for Astraeus Airlines for a few years now, and we [commissioned] an Astraeus Boing 757."

Added guitarist Steve Harris: "Taking our own 757 really [made] it a lot more flexible for us, and we [rammed] into the specially constructed cargo holds as much of the show as we possibly [could]. The schedule we put together due to this flexibility [was] very exciting, taking us to some places we [hadn't] been in a long while, and some we [had] never been to. It's a lot of flying, but well worth it."

Joining the high-flying band on the 50,000 mile round trip that saw them performing to 400,000 fans in 21 cities in 10 countries was Monitor Engineer Steve 'Gonzo' Smith and his DiGiCo D5 console, who ran no fewer than 18 monitor mixes for the six-piece outfit. "Maiden are very 'old school'," he commented. "The only band member on in-ears is guitarist Adrian Smith. The rest are all on wedges, with sidefills and a number of full mono mixes through speakers placed by the onstage ramps, which the band [ran] around on. Bruce also [had] additional fills at the back of the stage, projecting just a vocal mix forward. Of course, wedges are essential for the classic Maiden 'foot on the monitors' pose as well!"

DiGiCo UK
+44 (0)1372 845600
www.digico.org
Group One
+1 515 249 1399
www.g1limited.com

Martin Audio Launches W8VDQ

Martin Audio has introduced the W8VDQ, a compact, three-way system that combines line array differential dispersion technologies, purportedly providing an advance solution for users requiring even coverage over wide angles and throw distances.

To that end, the system has been designed to provide a short-throw horizontal dispersion of 120°, narrowing to 100° as the throw increases. According to the High Wycombe-headquartered live performance system designer, the vertical differential directivity (VDQ) – hence, obviously, the new product's name – creates progressively more HF output as the throw distance increases with the resulting dispersion pattern being ideally suited to covering audiences located on flat or gradually sloping surfaces.

Designed for passive or bi-amped operation, and combining a Hybrid quad eight-inch LF and MF configurations with a quad one-inch HF, the system achieves a maximum SPL of 131dB (continuous)/137 dB (peak).

Aimed at a wide range of applications – from live and theatre sound to fixed installations, the W8VDQ is compatible with WMX, WS18X, and WS218X subwoofers.

Martin Audio (HQ)
+44 (0)1494 535312
Martin Audio (USA)
+1 519 747 5853
www.martin-audio.com

Sheffield-sited audio mixer, amplifier, zoner, and specialist audio distribution system manufacturer Cloud Electronics has launched its new MPA Series of single zone mixer-amplifiers, comprising the MPA60 (60W), MPA120 (120W), and MPA240 (240W), each featuring six line inputs with summed stereo to mono, plus four microphone inputs into a single zone.

www.cloud.co.uk

Carvin's new 17-model-strong LSx range of loudspeakers comprises several passive and active two-way designs featuring 10- to 15-inch woofers – including the LSx1002, LSx1202, LSx1202A, LSx1202M, LSx1202MA, LSx1502, LSx1502A, LSx1502M, and LSx1502MA; 15-inch woofer-based three-way designs – LSx1503, LSx1503A, LSx2153, LSx1523 and LSx1523A; plus various passive and active 18-inch subs (LSx1801, LSx1801A, LSx1802).

www.carvin.com

Danley Sound Labs has launched the SH-96, combining 11 drivers – four 15-inch woofers, six five-inch mids, plus a single 1.4-inch HF compression driver – in a single enclosure with a quoted handling capacity of 2800W (RMS) and 50Hz to 18kHz frequency response (±3dB). Developed in response to a customer's request for the ultimate theatre experience, its first installation will be in the renovated IMAX theatre on Navy Pier in Chicago.

www.danleysoundlabs.com

Californian musical instrument and audio industry analogue and digital connectivity solution supplier Hosa Technology is shipping Da-Cappo Micro Microphones' DA12 single-ear microphone (featuring the company's European-designed 2.5mm diameter capsule for full frequency response), DA04 lavalier-style microphone (employing that same capsule), and DA11 'The Stick' microphone (again, featuring that same capsule, together with a long stem that can easily be bent to suit theatre applications).

www.hostech.com

The Future is Meyer

The way forward for Meyer Sound

HEATHER JOHNSON talks to John Meyer about what the future might hold for Meyer Sound Laboratories.

John Meyer has remained an audio innovator for more than 30 years with his scientific, often unconventional approach to loudspeaker design. Since forming Meyer Sound Laboratories with wife Helen Meyer in 1979, the Berkeley, California-based company has broken new ground in a number of ways, beginning in 1980 with the UPA-1 loudspeaker, that features a patented trapezoidal enclosure that has become an industry standard. Other firsts include the Source Independent Measurement (SIM) system, acoustical prediction software, and, most notably, the self-powered professional sound reinforcement loudspeaker. We recently sat down with John Meyer to discuss recent advancements in loudspeaker design and what could be in store for the future.

AM: In today's market, line array systems seem trending towards being smaller and lighter in certain markets. From a design standpoint, how do you accommodate that demand, yet still deliver customers the high SPL and even coverage customers are looking for?

JM: The main advantage that we have today in terms of designing and manufacturing smaller, lighter systems, is the variety of new materials that are available. Some examples are lighter materials such as the use of Neodymium in drivers, some of the new plastics that are available, as well as the improvement of electronics in power supplies have let us design smaller and lighter without compromising the acoustic performance of the systems.

Other design aspects that we always take into consideration are, of course, the physical size of the line array. We understand that every venue has different structural requirements – some need lighter systems than others, sometimes it's a space issue, so we always think about the solution or solutions that we will need to accommodate different situations.

However, in terms of delivering customers the coverage they need, it's the self-powered design of our products and their ability to optimise the amplifier/driver relationship that makes a big difference. Today, one can look at drivers and amplifiers as a system – you don't need to worry about amplifier racks anymore and it's no longer difficult to add equipment if you need it. Because everything is self-powered, it's really simple to add whatever equipment you need without reconfiguring everything.

AM: With a broader range of venues and engineers using line array systems, how are you building ease-of-use into your line array technology?

JM: When it comes to our line arrays the ease-of-use benefits of the products mainly result from the fact that they are self-powered. The ease of use of the products, combined with their power, is what's contributing to the use of line arrays in not only a broader range of venues, but a broader range of applications as well. The linear systems that we've created are optimised for being plug-and-play; they are very straightforward so all you really need to do is plug in and go. In addition, we have the Galileo Loudspeaker Management System, which has been designed to make it very easy to 'dial-up' the size of the array and drive line array system with audio.

The evolution of digital audio technologies has also had a tremendous impact on sound design; our MAPP Online Pro tool is an example of this. Because it's an extremely accurate acoustical prediction program, it makes things significantly easier for sound designers as it gives them the ability to predict the performance of a sound system before they step foot in the room. In addition, by using the Remote Monitoring System (RMS), extensive status and system performance data is directly delivered to the operator from every installed speaker, which makes it nearly effortless to supervise a sound system.

These tools, combined with the self-powered loudspeakers, enable a huge shift away from how things used to be, when everything involved in putting a system together was a balancing act. For example, it's much easier to set systems correctly because the ideal spectrum has basically been analysed, making it easy to identify where there's not enough power and to make changes very quickly.

AM: What are some of the more perplexing challenges faced by your engineering team these days?

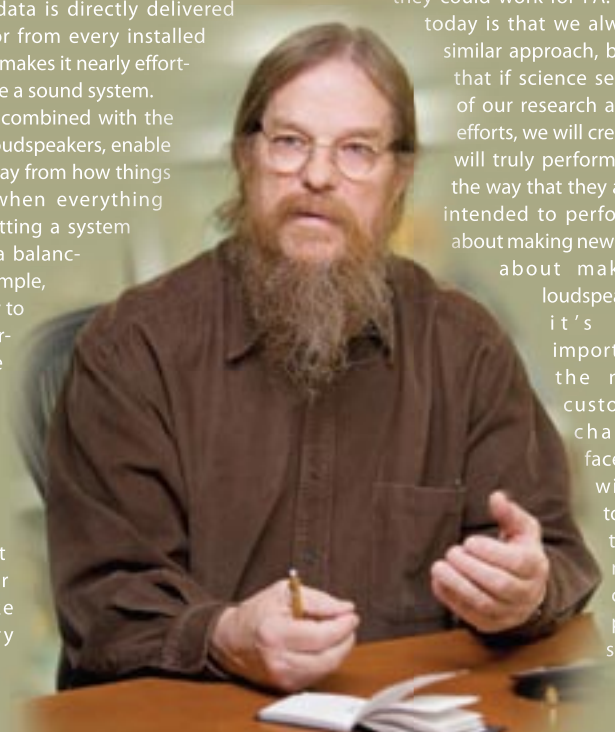
JM: That's a good question. I'd say some of our more recent challenges are things that we see in the MM-4XP, a 4x4-inch miniature self-powered loudspeaker. The fact that we were able to make the MM-4 self-powered is pretty remarkable; we had to incorporate an amplifier that was the size of the package, and while the finished product was two inches deeper than the MM-4, it's pretty incredible because it's powered by 48 volts.

AM: What technological developments are on the Meyer Sound horizon?

JM: Creating self-powered systems has really been a stepping stone for us to design and create more complex systems. Something we're exploring right now is wave field synthesis, which will allow us to create more spatially interesting acoustical environments.

AM: Compare your experience designing the Glyph loudspeaker system in the 1970s to designing loudspeaker systems today. My, how times have changed!

JM: Well, the Glyph was really a scientific experiment to test the viability of horns and how they could work for PA. What's the same today is that we always start with a similar approach, because we know that if science serves as the base of our research and development efforts, we will create products that will truly perform and function in the way that they are designed and intended to perform. It's not just about making new loudspeakers; it's about making the best loudspeakers. We also feel it's extremely important to address the needs of our customers and the challenges they face; as a result we will invest time to create solutions that will address much more complex problems or specific issues. AM



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the blue planet LIVE

Several years after *The Blue Planet* originally took television screens in 140-plus countries by storm, JONATHAN MILLER meets the team charged with taking its stunning sights and sounds to the stage (and a much bigger screen) at Birmingham's Symphony Hall on the final date of *The Blue Planet Live!* tour.

"In creating *The Blue Planet* I wanted to take the viewers on a journey to a place that they had never been before, and to be emotionally moved by it. I am delighted that World Class Service has teamed up with BBC Worldwide to produce the live events in 2008, which capture the original spirit of the BBC television series. From the creatures of the deep to the awesome blue whale, *The Blue Planet Live!* puts the audience in a moving and dramatic world at an immense scale."

So said Alistair Fothergill, Series Producer of the award-winning BBC documentary *The Blue Planet* that successfully sought to film previously unseen areas of the world's oceans using cutting-edge technology and investigate life beneath the waves, calling upon the superlative narrative talents of acclaimed broadcaster and naturalist Sir David Attenborough in order to do so. It's often been said that a picture paints a thousand words, yet even Attenborough's carefully chosen script could only convey so much when accompanying the eight 50-minute episodes of often stunning footage originally broadcast back in 2001, themselves five years in the making. Silence can be golden, yet (instrumental) music is arguably a universal language in itself, so who better to call upon to provide a suitable seafaring soundtrack than five-times Academy Award nominee George Fenton, who told a BBC interviewer at the time, "Three years ago, when I was asked to write the music, I imagined footage which would be awesome, terrifying, and magnificent. It is all of these things, but my lasting impression – and, for me, the greatest achievement – is that the remarkable films that Alastair Fothergill, Martha Holmes, and Andy Byatt have made actually manage to make the oceans feel as natural a habitat as the land. They have achieved this by a spectacular mix of scientific knowledge and dramatic flair. The same is true of David Attenborough. His commentaries are distinguished by their understanding, love of the subject, and, luckily for me, their musicality."

It was certainly a winning combination, with Fenton's suitably emotional and epic score going on to win BAFTA, Emmy, and Ivor Novello awards... and rightly so – so much so, in fact, that some bright spark had the idea of taking the 'show' to the stage, as it were, with a full-blown orchestra (conducted by none other than Fenton himself) playing along to a series of synchronised sequences from the television documentary being replayed on a gigantic overhead screen to select four-figure audiences around the country in 2006. This (potentially) risky business paid dividends with 'Fenton & Co' coming back for a second bite at the (performance) cherry two years later with a unique two-hour edit of the countless inspiring scenes from the much-loved programme being projected onto some of the largest screens ever used in the UK.

Sounding The Deep

Unusually, Manchester-based employer-driven initiative World Class Service was credited with presenting *The Blue Planet Live!* latest outing, joined by Arup – a global firm of designers and consultants behind many of the world's most innovative and sustainable buildings, transport, and civil engineering projects – as their title sponsor. "We are proud to be bringing this spectacular show back to the UK," stated the former's Managing Director, Howard Raynor. "Having already thrilled audiences in Los Angeles, Hong Kong, Montreal, and Copenhagen, it is returning to the UK on an even more breathtaking scale than before. Cutting-edge developments in image and sound quality, combined with the awesome images and an unforgettable score, have allowed us to create an exciting new breed of event which we hope will move and inspire audiences."

Living up to advance publicity hype is never easy, yet appointed freelance FOH Engineer Colin Pink – who had previously mainly worked in theatre, undertaking all testing for the Cadac Concert console along the way – took to it like a duck to water. "I was at the National Theatre for ten years," he begins, by way of background. "Then I thought it was time to move on, went freelance, and did a couple of films; I did a bit of post-production on the remake of *Alfie* [2004] and *Stage Beauty* [2004], and then I was ten weeks on set for *Mrs Henderson Presents* [2005], which George Fenton did the music for – bit of a connection there. His musical director/orchestrator was Simon Chamberlain, who plays keyboards on this show, so when this gig came up and Blitz, the suppliers, were looking for people to crew it, my name came up, so that's how I got the gig in the first place."

It's a small (and funny old) world, and, according to Pink, "...a funny old gig, because there's sort of two versions: the concert hall version, and the arena version."

On the face of it, one might have maybe assumed that mixing a full orchestra in the likes of Birmingham's

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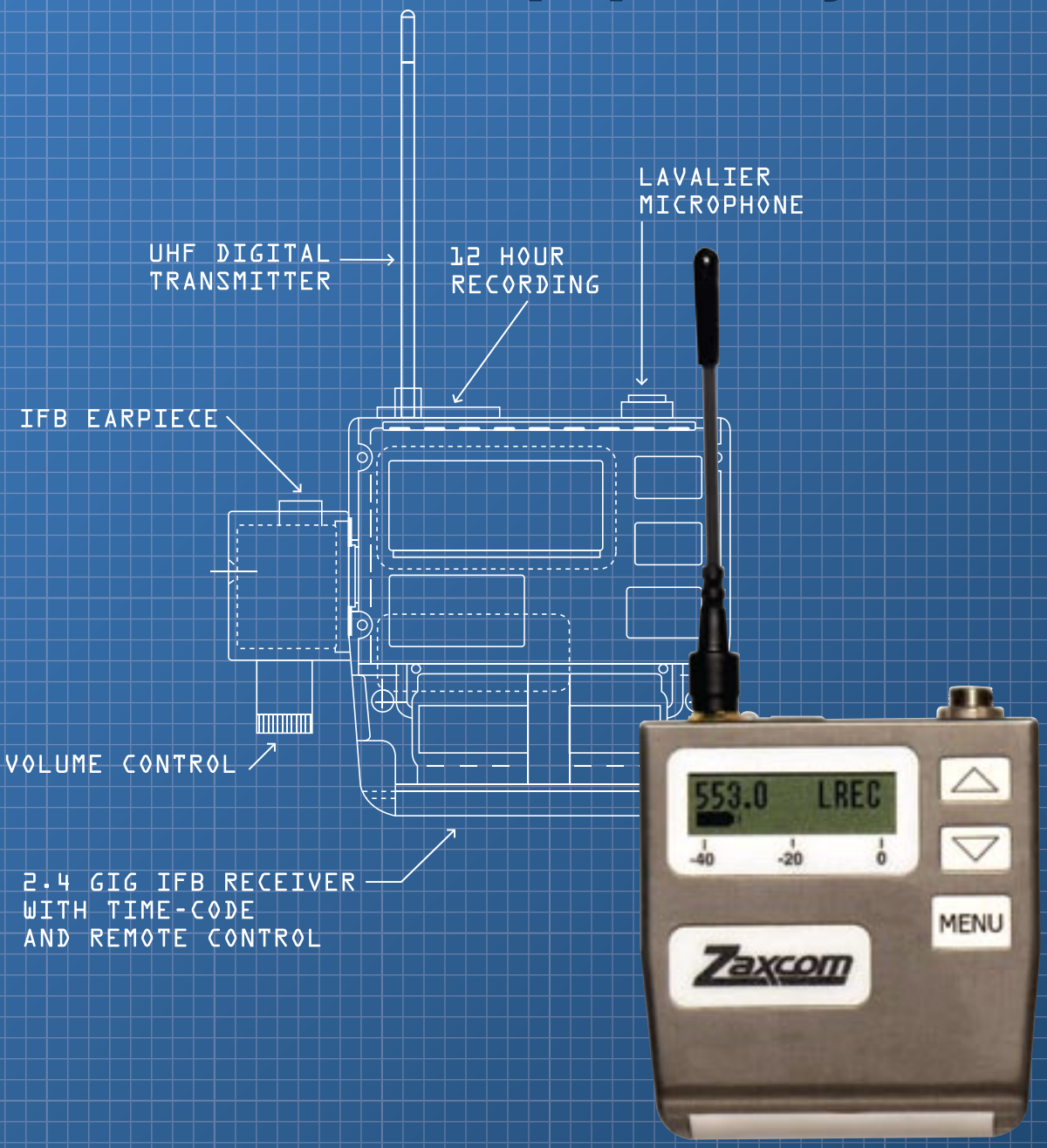

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contemporary (1991-vintage, 2,262-seat) Symphony Hall – with world-class acoustics engineered by New York-based performing arts facilities designer/planner Artec Consultants – would be an easier proposition than in, say, the comparatively vast (9,000-capacity) Manchester Central (formerly GMEX), sited in a former railway station (Central Station). Well, it ain't necessarily so, says Pink: "What was very surprising for me is that in the concert halls I thought I'd have a very easy life and have to do very little, because the acoustics should take care of it all, but because of the way it's written – it's film music – the orchestration is all about the detail, and concert halls are all about blending an orchestra so that it sounds nice and cuddly. So the big job in here is all about getting the detail out, which is great, because it's that old thing of not trying to fight the room, but rather using the good bits of the room and just adding what you need to add. But it's a completely different mix to the arenas, where I'm having to put in all the dynamics of the orchestra artificially, and here it's the opposite, because the room is putting in more dynamics, so I'm having to effectively flatten things off – and shout at brass players a lot!"

Given that George Fenton and his supporting cast of musicians are effectively reproducing an orchestral soundtrack recording session live onstage – albeit with no scope for repeat takes, it's a potentially confusing mixing landscape – seascape, even. "With the arenas, it's difficult, but, logistically, it's straightforward," posits Pink. "Everything's going to need to be mic'd, you're going to need a big PA system, and you're going to need to mix it, whereas I wasn't quite sure what I'd have to do in the concert halls, to be honest.

"The arenas are a tricky mix; it's high profile, and the mix is very critical, obviously, because if you get it wrong then you're getting it wrong through a very big PA! It's more forgiving in the concert halls, but, basically, I didn't know what the acoustics were going to do to the sound of the show, so I covered my arse and shoved everything out, expecting to use about half of it, and ended up actually using everything."

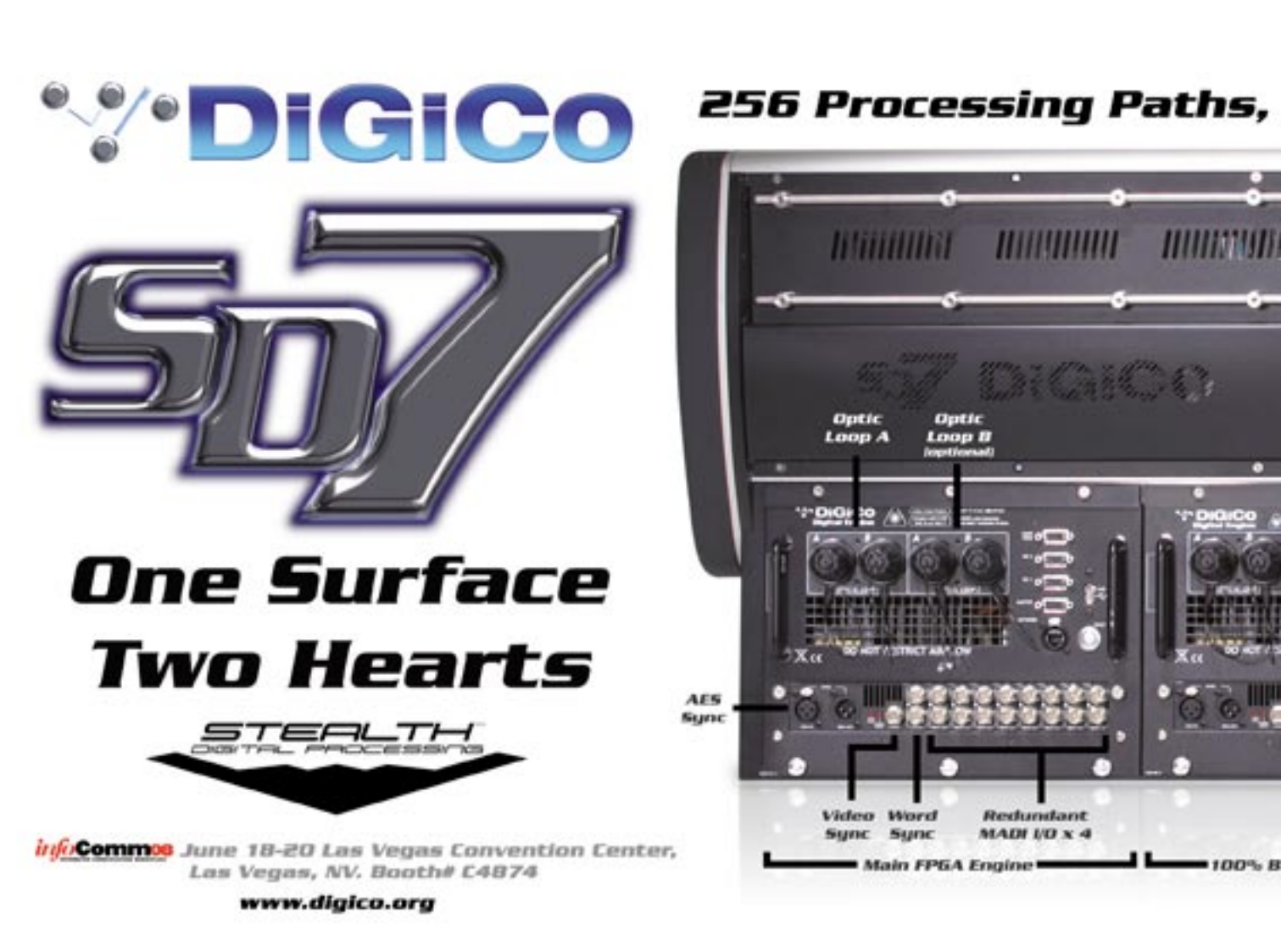
Changing tact, Pink adds, "If you hear this piece acoustically, it doesn't actually work, because all the emotion gets ripped out of it – the emotion being the connection between what's on the screen and what's being played, and that's all in the detail, which makes it very exciting to mix. And that's the other main part of the job: getting the perspective right – making the orchestra as big as the screen, because the audience aren't looking at the orchestra. There's a very large screen, the images look fantastic, and the soundtrack has to match that. Basically, we're doing a film mix live, which is quite interesting."

Orchestral Manoeuvres

Although Pink mixed *The Blue Planet Live!* on its first UK arena-only outing two years ago, sub-mixing the strings on one of his beloved Cadacs, while working mainly from an unspecified "...big analogue Yamaha," this time round he was also involved in specifying the kit: "This time, because of the schedule, it seemed obvious to go down the digital route, because there's 118 audio channels, which is a monster, so we ended up with two [Yamaha] PM5Ds, with one of them basically being used to sub-mix the strings. What's nice about the digital approach is that you have everything at your fingertips; if you need to put a compressor or a gate on something then it's very easy to do that without having to cart lots of outboard racks around, and that gives you more time to concentrate on getting the mix right.

"You could argue that Cadacs sound nicer than PM5Ds – in fact, they do, but, at the end of the day, you either go for instant quality or speed, and, on this occasion, speed was more important."

So what's at the stage end of those multiple audio channels? Quite simply, microphones. Lots of them. Just like recording an orchestra in a studio. "There is a big crossover in that the main thing that we wanted to be able to get hold of was the detail," reiterates Pink. "Because it's live, it's one take, and you need to have control – especially in the bigger venues, which is primarily why there are so many mics. Everything is close-mic'd; the violins, violas, and cellos are all on clip-on DPA 4060s with the miniature mics just clipped onto the bridge, so that's as close as you can get. The added advantage of that is that it helps eliminate feedback problems, so that seemed the obvious choice – great microphones that give you all the detail you need. The double basses are on [Sennheiser] MKH40s –



again, just a great mic.

"Everything else is more akin to theatre orchestra miking than recording: basically, the woodwinds are all on Schoeps CK4s; there's four percussion players, which are mainly all on [Neumann] KM184s – great 'sling it on anything and it'll do a great job' mics; lots of [Neumann] U87s on the timps; the French horns, trombones, and the trumpets are on [AKG] 414s; the harp is an MKH40 stuffed in a hole in old rock 'n' roll fashion, so we've got decades of level on that.

"Interestingly, again, we needed control of the choir, because of the proximity to the orchestra; normal overhead miking wouldn't have given us the level that we needed to get out of them, so they are all on [Sennheiser] SM58s – one each. They've also got some wedge monitors, simply because they're so close to the rest of the orchestra that it's very hard for them to pitch properly, because they're getting a lot of French horn."

"The choir is used as another voice in the orchestra – not like normal choir singing by any standards, and they work a lot with the keyboard player."

Ah, yes, George Fenton's right-hand man, the gig-getting Simon Chamberlain. "He's doing a plethora of sounds," states Pink. "We spent some time adjusting his own monitoring levels so that the internal balance worked well, and I spread his sounds through the foldback on stage so that blends better from the source, as it were. A lot of it is choir-ey pads and piano-ey stuff, and percussion – all sorts, in fact, but it's quite sympathetic to the rest of the orchestra, and it seems to work very well."

Synchronicity Of Life

While Fenton's magnificent and atmospheric music is being brought to life by two equally magnificent full-scale orchestras – with the BBC Concert Orchestra handling the London and Cardiff dates, while the Manchester Camerata stepped in for Manchester; Nottingham, and Birmingham – whose contribution to the success of *The Blue Planet Live!* production – led, of course, by the aforesaid celebrated composer/conductor – cannot be understated, even if the audiences are inevitably drawn to looking at those fantastic-looking onscreen images upon which everything ultimately hinges, as alluded to earlier by Pink: "There's two video sources, one doing the main screen, which has four tracks of audio – basically, a stereo music track, because there is some backing music, and then there's the sound effects tracks for the images that you're seeing – lots and lots of waves, and fish and whales! It's quite hard to blend the two together – not from an audio point of view, but more from an emotional one, like in a film soundtrack, where the music is sometimes featured more and sometimes the effects are, depending on what's happening emotionally, and it's exactly the same here."

"The effects were put together in isolation as an effects track for this piece by a traditional recording engineer who's looking at it as a flat TV effects mix that was then going to be sub-mixed when it came to voiceovers and music, and so on, which is what Colin's having to do dynamically," chips in Technical Director Alan Cox, a battle-hardened systems designer specialising in video control,

charged with overseeing those eye-popping video projections, and much more besides.

Continues Cox: "There are a handful of bits that might be from a sound perspective, because, slightly unusually, the replay system is from a video point of view, so we're using the updated bonzaiDRIVE from Rosendahl, which has got ADAT embedded; there's some tricks we're playing with that, because we're running two sets of everything in sync. The primary screen displays George's click and streamer, and that's all doubled up. I've put in the new MOTU 828mk3, because it's got 16 channels of ADAT, so we can seamlessly switch over on the ADAT lightpipes between primary and backup, and we're doing primary and backup clicks as well, because there are certain points in the show where certain members of the orchestra need to pick up a click to do the links for certain transitions. In terms of keeping this thing together, there's quite a lot going on that's completely invisible to the audience."

Pink: "I have three click sends, one of which goes to the orchestra, which I mute and un-mute when necessary, and then there's two sends to George, who has an IEM – basically, a constant click, and an intro-only click; he can switch between the two, so if he's on constant click and wants to conduct free for a while, he can just switch that off, and then switch it back on when he wants to get back into it. Obviously, he also has the timecode and streamers so that he knows where he is, and that's kind of how the show's kept together."

Adds Cox: "Because the conductor is the composer, driving the orchestra from a conducting point of view, he drives them best from the pictures. Bearing in mind where the pictures are, relative to his view scope, he has a separate source that displays timecode, stings, and all that; nevertheless, it's right in his face for a piece that he knows intimately. He tends to drive the orchestra to picture, which is what he does for a living, but he's doing it live."

George Fenton is evidently a brave as well as talented individual... a rare breed, indeed. Were it not for Fenton, chances are *The Blue Planet Live!* would never have happened. Or if it had, it would have probably sounded very different.

Hearing Is Believing

Reproducing such a detailed soundtrack-style performance live in unforgiving arenas also dictated Pink's choice of accompanying sound reinforcement: "Last time we did the show we used d&b [audiotechnik] Q-Series and Q-SUBs, which worked very well, but were just about running out of steam, so this year we opted for the d&b J-Series – lovely boxes, because they're smooth sounding, and they throw forever, it seems – and J-SUBs, which we ran in hypercardioid mode, which worked incredibly well, because one of the big aspects of the show is that all the sound effects add a lot of impact, and when there is a lot of – for want of a better word – film soundtrack effects, the sub-bass has to really thump. I was very impressed with the J-SUBs for that application, because they throw the sound for miles, and you still get a very big impact 17 metres back."

Coincidentally, both concert hall venues also feature in-house d&b audiotechnik sound systems – C4-TOPs and C4-SUBs in Birmingham Symphony Hall, while Cardiff St David's Hall had taken a Q-Series route, which suited Pink down to the ground. "The problem with box selection on a show like this is not so much in the arenas, but in the concert halls, where it's so dependent on the acoustic of the hall," he reasons. "In some ways you're better off using the equipment, provided they've done some research and had some boxes in for auditions, because if you bring your own boxes in, you never know exactly how they're going to react with the room. So if someone else has done that homework for you, it gives you that bit more time to tweak it and get your head around it. If it was a box I'd never worked with before then, obviously, I might rethink that, but, in this case, everywhere we went – Cardiff and here – I'd used the boxes before. I know them well, so felt quite comfortable.

"My big ethos is never try and fight the room, because the room will always win, so it's just a case of working out the best way of making the best of what the room is offering you."

Wise words indeed, though easier said than done in the hands of a lesser-skilled and less-experienced engineer than Pink.

Great Gig In The Sea

Whatever the sound system, one thing's for sure: such gigs are few and far between – perhaps once in a lifetime, even, in the case of *The Blue Planet Live!* As Pink considerately concludes, "It's the best show I've ever done in my life, because as a sound engineer you so rarely get an opportunity to work with a 78-piece orchestra and a choir in a live environment where you're trying to match the scale of some beautiful film footage. For me, it's the ultimate mix, because you're doing a film soundtrack live to five- or six-thousand people, which never happens, really. It doesn't come around very often. It's an utter joy – especially working with George and his team, because the music is so emotionally driven."

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ROYER LABS R-121 & R-122

LIVE RIBBON MICROPHONES

Three weeks in the making for endless opportunities, SIMON ALLEN discovers Royer Labs' surprisingly versatile mics.

Firstly, I have to confess I wasn't quite prepared for the surprise when I set up these microphones for the first time. I was already expecting the clear and very natural sound that ribbon microphones are known for delivering, but I wasn't expecting it to be quite on this level, especially in a live situation. These microphones have created a fair bit of interest and I can see them becoming a standard expectation on a lot of riders from here on in.

Both microphones come in a very attractive wooden case along with a suitable mic holder. The case just gives a hint of how well these microphones are built. At first glance it is apparent how much care Royer Labs takes to build each microphone. According to Royer Labs, from start to finish, they take three weeks to build each one. As well as the quality factor they feel very robust for such a delicate piece of technology, clearly making them ideal for stage use.

Both the R-121 and the R-122 have the same capsule and offer an amazingly high SPL of 135dB. They give one polar pattern that is a figure-of-eight. The Royer logo on the front indicates the side with the highest SPL for those louder sound sources. The SPL on the back is 115dB due to the internal dampening screen on the front edge being much closer to the ribbon element.

Operation

These mics come with holders so you're ready to mount them and get underway, but they really need suspension cradles as they are very sensitive down to about 50-30Hz. I used the R-121 first and was very impressed with its sensitivity, but the R-122 with its internal electronics was truly amazing. The gain setting for the R-122 is about 13dB less, also keeping it in range for when the higher SPL is needed as well as making it ideal for distance miking.

The figure-of-eight polar pattern makes these mics an obvious choice for the classic Blumlein technique on an orchestra or any stereo ambient room sound you require. It's also great for the Mid-Side technique which I really enjoy using in the studio. On the stage I used the R-122 inside High Barn's acoustic grand piano, and the figure-of-eight allowed not just the sound from the hammers to come through, but also the ambient sound from the lid.

The uses of both these microphones are endless, more than most ribbon microphones. Royer says you can use them in both the recording studio and for sound reinforcement for the following: close and distance miking, electric guitar, acoustic guitar, vocals and voiceover, brass, drum overheads, bass drum, percussion, strings, acoustic piano, and harp!

Obviously, as any good engineer knows, any decent microphone is only decent when located in the right place. With the R-series from Royer it is very important to consider not just for audible reasons, but to protect the ribbons from being over stressed. With high SPL sound sources, Royer recommends placing the microphones off axis when close miking to prevent any damage as well as reducing any dampening. If the sound source is of a lower SPL, then by using the rear side, you achieve a slightly brighter response (at closer than three feet), making them even more versatile.

In Use

The first task I put to the R-121 was an electric guitar amp that was part of the back line on stage for a live gig. It was a relatively good sounding amp comprising of two Mesa Boogie cabs driven from a Class 2 amplifier, and a DigiTech effects unit. When I first brought up the level from the mic on the front of house it simply sounded like the guitarist had turned up.

The sound from these ribbon microphones is unbelievably transparent and very natural. Royer claims that the mics hear like your ears do, and they're right. At first, they sound like they don't add any colouration to the sound source or add any characteristics. The EQ most of the time was flat for all uses on the live sound side but in the studio particularly they needed a little mid taken out and some top end adding.

After trying both microphones with the acoustic grand piano and as drum overheads in both a live and studio situation, it became apparent that what these microphones do offer is a slightly darker sound than other mics. They capture a lot of 'air' and atmosphere in a very realistic manner, particularly the R-122 with its extra sensitivity. Interestingly on the stage they do offer a great deal of separation, and even with the figure of 8 polar pattern, they do not run into feedback as soon as you might expect. This separation and accurate live natural sound makes these microphones ideal for live recording and broadcast, as they capture what it's really like, as opposed to other microphones that do add some character.

My main criticism with both these microphones is their frequency response which only really goes up to 15kHz. For example, whilst using them in the studio as drum overheads, it was apparent that they didn't deliver that top end sparkle. They are great to capture a clean and accurate sound, and it is very re-assuring to hear them cope with high SPLs. However if you're after the really high top end then you might need to blend in another mic. Interestingly, Royer notes that these ribbons will 'take extreme amounts of EQ', implying that a fair slab of high-end boost might achieve a more 'condenser' sound.

I have to mention that when I used the R-122 inside the grand piano, half way between the strings and the lid along with a couple of other mics closer to the strings, I think I managed to get one of the best live piano sounds I ever have. The R-122 gave so much depth and clarity to the piano which is normally very hard to represent on a PA.

Conclusion

Royer Labs has done a great job with these live ribbon microphones. They are not only ideal for sound reinforcement but are good all-rounders in many situations including recording and broadcast. They have been beautifully made and with a lifetime guarantee, I think Royer has got the price right as well. These microphones sound very natural, and the clarity of the R-122 in-particular is amazing. A brilliant development in ribbon microphone technology.

INFORMATION

£ **R-121 US$1,395.00, R-122 US$1,895.00**

Ⓐ **Royer Labs, Inc. 2711 Empire Avenue, Burbank, CA 91504**
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THE REVIEWER

SIMON ALLEN is Stage and Studio Manager of High Barn.

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